Queen's University

Campus Master Plan

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Acknowledgment of Territory

Queen's University is situated on traditional Anishinaabe and Haudenosaunee Territory. To acknowledge this traditional territory is to recognize its longer history, one predating the establishment of the earliest European colonies. It is also to acknowledge this territory's significance for the Indigenous peoples who lived, and continue to live, upon it – people whose practices and spiritualities were tied to the land and continue to develop in relationship to the territory and its other inhabitants today. The Kingston Indigenous community continues to reflect the area's Anishinabek and Haudenosaunee roots. There is also a significant Métis community and there are First Peoples from other Nations across Turtle Island present here today.

Queen's University

Campus Master Plan

Executive Summary

The Campus Master Plan is a framework for change that will guide how Queen's University physically evolves over the next 10 to 15 years. The Campus Master Plan does not pre-suppose growth; rather it illustrates how Queen's lands can evolve in a coordinated manner, resulting from strategic planning decisions.

The Campus Master Plan is organized in nine chapters, and two parts. The first part provides a vision and master plans for both campuses, while part two provides specific design guidance to each precinct.

Part I

Chapter 1: Introduction

The Study Process

The Queen's Campus Master Plan study process was conducted over a 15-month period, with completion in spring of 2014. The Campus Master Plan study process was managed by a project team overseen by the Deputy Provost, consisting of University representatives from Physical Plant Services, Campus Planning, and Communications.

The University retained a team of experienced consultants, led by Urban Strategies Inc., with a range of skills and expertise to assist the University in the project. Regular meetings with the Campus Master Planning Advisory Committee (consisting of representation from faculty, staff, students, community and alumni) ensured that the Plan evolved in alignment with broader University objectives and responded to the needs of all users of the Queen's campus.

A comprehensive consultation program, consisting of community events and multiple opportunities for dialogue online, was developed to ensure the Plan was developed in a collaborative manner with Queen's faculty and staff, students, Kingston residents, City staff and officials, and other interested parties.

The Study Scope and Why A Plan Was Needed

The Campus Master Plan focuses on the University's Main Campus and West Campus, where the majority of Queen's day-to-day activities currently take place and are expected to in the future. The vision and recommendations contained in the plan are meant to ensure that the University physically evolves in response to contemporary learning, research, and social needs and that its campus continues to be an exceptional place for students, faculty, staff and Kingston neighbours. In this time of limited resources, future investments must be carefully considered to ensure the greatest return on investment while simultaneously addressing contemporary needs and ensuring flexibility for the future.

Determining Capacity and Promoting Renewal

An overview of current campus conditions is provided, as well as the steps taken to identify Main Campus' and West Campus' current development capacity, including land utilization, building condition, and historic significance. Potential development sites consist of vacant and underutilized sites, or buildings with a critical backlog of deferred maintenance that are not historically significant. Although there is room for incremental change on Main Campus, there are very few sites that are the right size and shape to accommodate modern University development in an efficient way.

West Campus contains more substantial opportunities for development than Main Campus. There are more underutilized and vacant sites with opportunities for development while the north end would be maintained to accommodate sports fields, facilities, and parking. Due to capacity constraints on Main Campus, West Campus will play an increasingly important role in the Queen's University experience.

Chapter 2: Existing Campus Conditions and Needs

The Plan promotes renewal by aligning required investment with desired campus building objectives.

Evolving Space Needs

Regardless of future enrolment, rapidly evolving pedagogy has created a need for Queen's to assess current space requirements. A space analysis was conducted to assess existing and required facilities to support research, teaching, and campus life. A summary of this analysis is presented.

The findings indicate Queen's does not have a deficit of space overall, but rather, it requires more of certain types of spaces and less of others. The renewal and retrofitting of existing spaces will be required to meet pedagogical and technological evolution.

Queen's has done a relatively good job of maintaining an appropriate amount of facilities in relation to its enrolment. Regardless, the University currently lacks sufficient instructional and research laboratory space, classroom facilities, and study space, as well as social spaces that support Queen's role as a predominantly residential campus.

An overview is provided regarding the nature of new spaces. New spaces should respond to existing learning trends, but also be flexible enough to anticipate further changes, new technologies, and the uncertain needs of future Queen's staff and students. New spaces should prioritize flexibility, mixed and overlapping uses, multiple loci of activity, and the convergence of functions and services.

Chapter 3: Campus Vision

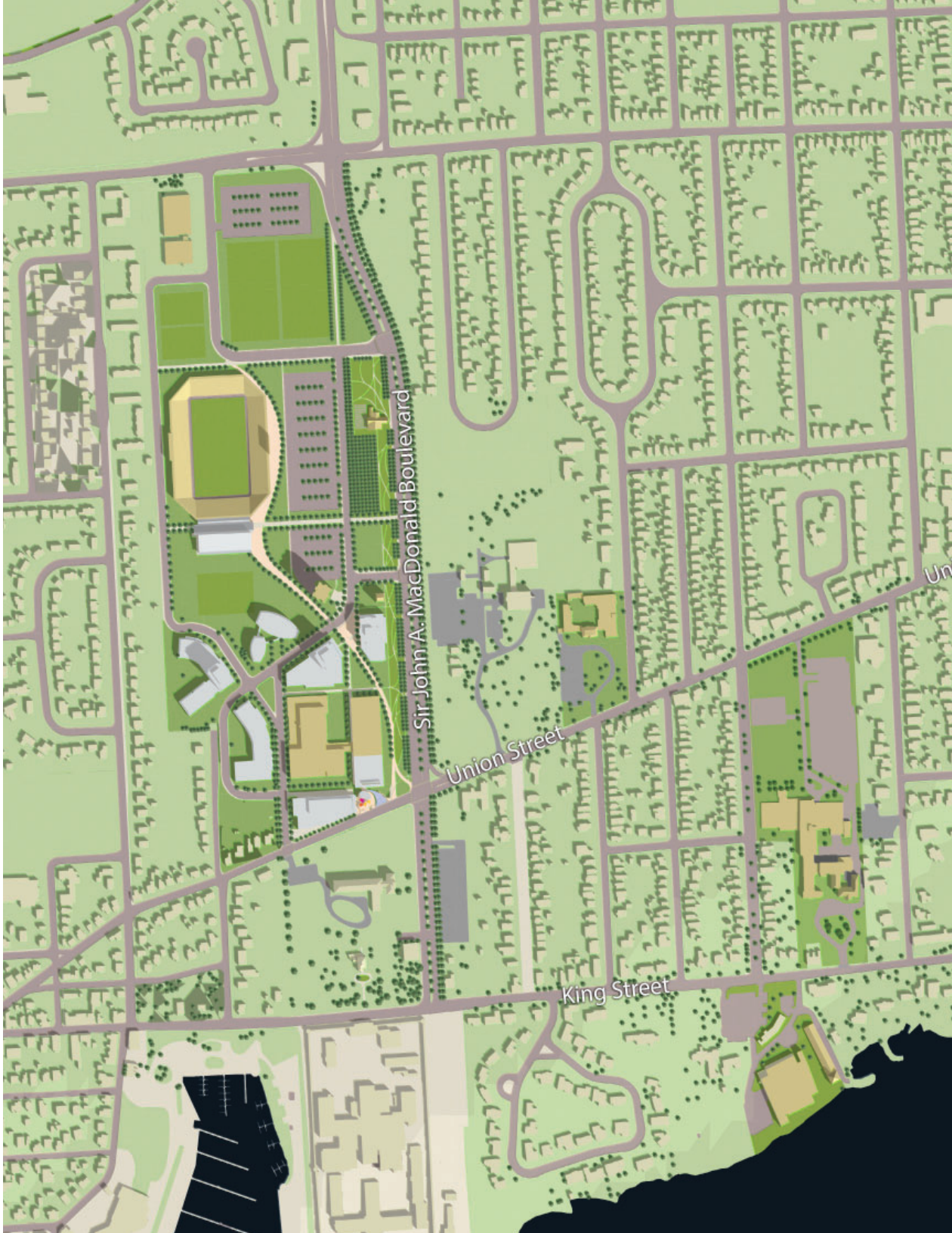
Queen's University is an institution with a rich legacy, reflected in its traditions, setting and historic campus places. It is also a forward looking institution that promotes an exceptional teaching and learning experience balanced with research and the advancement of our collective knowledge.

The Campus Vision outlines a high level direction for the evolution of Queen's physical setting, described through guiding principles and images. The physical vision informs the detailed framework recommendations provided in the Main and West Campus Master Plans.

Guiding Principles

The planning principles, developed based on consultation throughout the process, define the assumptions and philosophies driving the vision and recommendations of the Campus Master Plan. They also provide a means of evaluating future updates and possible amendments.

1. Support Queen's academic mission
2. Enhance the campus experience
3. Promote good facilities management
4. Foster a more sustainable campus
5. Integrate the campus with its settings
6. Create a campus that supports health and wellness



The long-term vision illustrates the full-range of development and open space opportunities described in this plan. Buildings in white illustrate potential new buildings, while existing buildings and those under construction are illustrated in yellow.

The Plan promotes synergies between Main Campus and West Campus.

The Vision for Main Campus

To students, staff, faculty and alumni alike, Main Campus will continue to be understood as the symbolic heart of the University's identity. The physical aspects of this "traditional campus" – iconic architecture and picturesque open spaces situated on a compact, walkable street and pathway pattern – will be maintained, however uses will evolve.

The Vision for West Campus

West Campus has long been perceived as isolated from the majority of campus life and disconnected from the central part of Kingston. While some growth and change of past years has sought to remedy this sense of isolation, there is still a long way to go. The West Campus of the future will see a number of new uses and destinations, better services, new public spaces and an improved mobility system.

Chapter 4: Campus at the City Scale

There is a need for co-ordinated planning to ensure mutual benefit between the City of Kingston and Queen's. Building on existing University and City initiatives, the recommendations put forward in Chapter 4 are intended to complement the vision and policies prepared by City staff and the Kingston community who have been consulted throughout the study process.

The Plan provides guidance regarding the evolution of both the City and campus in a co-ordinated way.

City Initiatives

City plans, studies and capital projects help the University understand the City's goals and intent for various areas around campus. This section identifies places where change should or should not occur, informing the University's decisions regarding off-campus uses such as residences. It also identifies City initiatives which provide opportunities for coordinated improvement.

Movement between Campuses and Parking Strategy

As more development occurs on West Campus, the University will require an expanded transportation system to carry the Queen's community between campuses.

A campus circulator is proposed which would be open to all Queen's students, staff and faculty. Planned as a continuous loop, bringing rapid transit service to Union Street, the circulator should provide regular service between campuses and stop at high traffic areas, such as surface parking lots on West Campus and the proposed West Campus Square.

Cycling Network

A key component of the University's broader objectives to create a sustainable campus is developing a safe, inviting, and convenient active transportation network.

The Cycling Network plan (Figure 4-3, Page 49) - consisting of existing and proposed routes and trails - ensures Queen's cyclists are supported by infrastructure and facilities that prioritizes cycling equally to the pedestrian and private vehicle.

Housing

The University supports the preservation and restoration of stable residential neighbourhoods and promotes housing that is of the appropriate form and in the appropriate location.
This section indicates different places on and near the campuses that are considered appropriate for different types of housing. These types of housing are:

- **Campus Residences,** multi-unit buildings owned and maintained by the University.
- **Main Street Revitalization**, store-top, mid-rise apartments located along Princess Street.
- **Neighbourhood Infill**, low-rise buildings complementary to surrounding housing character.

City Streets

In addition to carrying people and traffic, streets are places and destinations in themselves. Each street type's function and character informs the number of traffic lanes, width of sidewalks and plantings, design character, and the scale of adjacent buildings. Each major University street is described and given a cross-section that provides design direction to implement its use and character:

- As the primary connector of West Campus and Main Campus, rights of way for all modes of transportation on Union Street will be enhanced through pedestrian, cycling, and transit infrastructure improvements.
- University Avenue will continue its role as Queen's ceremonial avenue. Small-scale design enhancements will seek to reduce traffic speed, improve appearance, and allow for safer crossings.
- Building on the City's plans for streetscape improvements north of Johnson Street, Sir John A. Macdonald Boulevard will be a grand, green street extending from Highway 401 to the waterfront, featuring new landscaping and design details.
- King Street connects some of Kingston's most historic places as well as Main Campus to the Isabel Bader Centre for the Performing Arts. To complement its role as a cultural landscape, it will be designed with a higher level of detail and amenity than most streets.

Chapter 5: Main Campus Master Plan

Main Campus' historic buildings, open spaces, and gathering spots are fundamental to the image of Queen's and highly valued by students, staff, faculty, and alumni alike. Even though the campus is much loved, changes on Main Campus will be necessary to ensure the University provides the appropriate facilities and social spaces for a contemporary and sustainable campus. Change will occur mostly in the form of renewal to existing facilities, with the objective of bringing older buildings into contemporary conditions, all while protecting and enhancing the existing campus image and experience. Modest amounts of new development will also occur in the Campus' few remaining underutilized development sites. Where this occurs, it is important that new buildings respond to the existing context through sensitive design. The Main Campus Master Plan provides direction regarding change through a series of plans for the different systems and networks that make up the campus.

Land Use and Social Infrastructure

Rather than provide a prescriptive land use structure on Main Campus, this section provides recommendations to locate uses and facilities on campus that support an interdisciplinary learning environment. The objective is to identify the pattern of "social infrastructure" , the key places of gathering and learning at Queen's. This is consistent with the directions of the Library and Archives Master Plan, which seeks to increase the number of individual and collaborative learning and study spaces to better support scholarship and research.

The land use and infrastructure plan identifies those places on campus that are currently lacking social infrastructure, and recommends such spaces be located there. It also identifies the places where these concentrations exist and aligns them with broader public realm improvements providing formal spaces for social life to occur.

Renewal and Development Sites

With few vacant parcels remaining on Main Campus, there are limited major development

Bader Lane
Stuart Street
King Street

opportunities. As a result, the focus for change on Main Campus in the near term will be the renewal of existing facilities to better align existing spaces to meet the needs of current and future users. The Main Campus Renewal and Development Sites (Figure 5-4, Page 73) identifies sites on campus appropriate for change either in the form of new construction or redevelopment sites. It also provides guidance regarding design considerations that will be addressed through new development. These include key building frontages, historic buildings (or portions of buildings) to be protected, view terminus, and required courtyards.

Heritage

The historic nature of Main Campus is one of its most defining qualities. Each building on campus was evaluated based on individual architectural significance, as well as its contribution to Kingston's historic landscape. The Main Campus Heritage Plan (Figure 5-3, Page 69) provides two considerations for Main Campus' buildings that are historically significant. The first category, "Historic," illustrates buildings with either an individual historic significance, or that strongly contribute to a historic landscape, such as the houses on Barrie Street opposite City Park. These buildings should be retained, but under appropriate circumstances, may be incorporated into new development.

The second category, "Redevelopment Permitted," illustrates older buildings that may be either retained or demolished, but where replacement development must respect the existing housing form of the street.

Open Space Network

The historic core of Main Campus is defined by its rich network of highly valued open spaces. These places support the image of Queen's and are also important places to gather and form community. Main Campus' Open Space Network (Figure 5-5, Page 76) consists of four landscape types that reflect the general role, function and hierarchy of places within the larger network. Each category consists of existing places. In addition, a number of new open spaces are proposed for each category.

- Picturesque landscapes are expansive open spaces, designed to convey an idyllic natural setting.
- Formal linear landscapes – containing streets and walks – are linear open spaces designed to move people through the campus and provide views to landmarks and other campus-defining elements.
- Plazas, courtyards, and small greens provide casual settings for day-to-day campus activity. They are places for more passive uses such as meeting friends, studying, or taking a break between classes.
- Gateways are the places within the larger open space network that mark the transition from the City to the campus.

Movement

With campuses designed as pedestrian environments, and to ensure Queen's promotes sustainable, active transportation choices, it is important that the Queen's movement network maintains it functionality while prioritizing pedestrian safety and comfort.

The Pedestrian Network (Fig 5-55, Page 117) seeks to holistically integrate car and pedestrian networks to create a safer and more continuous experience for the pedestrian. This can be achieved by extending the fine-grained pedestrian network to the campus edges, identifying priority areas for pedestrian improvements, and enhancing streets and paths.

The Street Network (Figure 5-56, Page 119) considers the street and pedestrian network in conjunction, and addresses points - through recommendations for intersection and crosswalk improvements - where the street network disrupts the continuity of the pedestrian network and poses safety issues to pedestrians.

The Cycling Network (Figure 5-57, Page 122) provides greater detail to the Cycling Routes illustrated in Chapter 4, illustrating a number of new routes and trails, and identifies key routes for enhanced bicycle parking.

The Servicing Strategy (Figure 5-58, Page 125) retains some existing service routes, but also proposes the re-alignment of some, including Fifth Field Company Lane. Unlike personal vehicles, servicing vehicles need routes that carry vehicles further into the core of campus, to deliver goods and products to individual facilities. The placement of some service routes are intentionally located to minimize disruptions with pedestrians, but where they intersect, the design of servicing functions needs to be thoughtfully considered and designed, so as not to disrupt the image and the quality of the campus setting.

Utilities

This section identifies existing systems and proposed solutions for main utilities (water, gas, sanitary and storm), electrical power distribution, and heating and cooling. New development will influence and require upgrades to the existing utilities which support Main Campus. In addition to the base utilities, and understanding Queen's strong commitment to sustainability, there is also an opportunity to implement further upgrades to increase energy efficiency.

The Plan will co-ordinate investment in buildings, facilities, infrastructure and landscapes on both Main Campus and West Campus.

Chapter 6: West Campus Master Plan

The West Campus Vision imagines a modern and attractive campus that pays tribute to a varied and rich history. The vision balances learning, working, living and recreation needs by creating a diverse network of flexible, comfortable, and inviting spaces with different characters and functions. Whereas the Main Campus Master Plan emphasizes the renewal of the much-loved historic campus, the West Campus Plan provides the basis for a long-term framework for creating brand new places that borrows elements from what people love about Main Campus (such as social spaces, beautiful squares and plazas), but that recreates them in a contemporary, context-specific manner.

Land Use and Social Infrastructure

On West Campus, different types of uses and services including academic buildings, administrative offices, clinics, sports and recreation facilities, and outdoor spaces will intermingle to provide amenity and vitality at all times of day, ultimately creating a more complete campus community than what currently exists. The West Campus Social Infrastructure Plan (Figure 6-2, Page 147) identifies four different land use "clusters" which establish a pattern where certain uses are best suited. The different clusters include the Mixed-Use Student Life Cluster, Residential Cluster Academic Core, and Athletics Cluster.

Heritage

West Campus contains a modest number of historically significant buildings, including the former Prison for Women site and the Water Tower, originally part of the Kingston Penitentiary Farm. As with Main Campus, these historic buildings will be protected due to their significance, with the former Prison for Women site an opportunity to be a legacy project for Queen's that will result in a distinctly memorable place.

Yonge Street

Renewal and Development Sites

West Campus contains a number of potential development sites for new, larger scale uses. The development sites are positioned around the future expanded mobility network.
The West Campus Renewal and Development Sites Plan (Figure 6-4, Page 151) identifies sites appropriate for redevelopment, as well as development considerations to ensure development contributes to the West Campus vision's design objectives.

Open Space Network

The original agrarian and penitentiary operations that once characterized the West Campus are gone. What remains are the remnants of a rich and varied past and large open spaces full of potential. The West Campus Open Space Network Plan (Figure 6-5, Page 153) proposes a variety of spaces that greatly improve West Campus' sense of place and provide new opportunities for the Queen's and Kingston communities to enjoy. Of particular significance is Sir John A. Macdonald Green, a large scale linear park adjacent to Sir John A. Macdonald Boulevard consisting of many distinct character areas. In addition to this major project, the plan identifies new Formal Linear Landscapes in the form of walks and streets; Plazas, Courtyards, and Greens; and Gateways.

Movement

While the movement network today on West Campus is sufficient to serve the limited places that exist today, as it develops further, it will be imperative that the street and pathway network is expanded to create more movement options for pedestrians and cyclists, and ensure good vehicular flow.

The West Campus Pedestrian Network plan (Figure 6-29, Page 175) provides an expanded pedestrian network on West Campus that will consist of a number of new walks weaving between new campus buildings as well as the addition of sidewalks to existing campus streets. Together, the pedestrian network will provide a fine-grained network of paths similar in scale as Main Campus forming a safe and thorough system for getting around campus. An expanded West Campus Street Network (see Figure 6-30, Page 177) will support the new places and destinations on West Campus and provide more movement options through West Campus. A number of expansions and realignments to the street network, including a number of new access roads connecting to Sir John A. Macdonald Boulevard and an extension of West Campus Way south of Union Street, will be realized over time as West Campus evolves. As with Main Campus, streets on West Campus are also part of the open space and pedestrian networks, and should incorporate safe and attractive design consisting of continuous sidewalks and accommodating different modes of travel.

The infrastructure and facilities for cyclists on West Campus will be extensive and well-considered. The West Campus Cycling Network (Figure 6-31, Page 179) consists of the existing on-street cycling route on Union Street, a proposed cycling trail that will be incorporated

into the design of the Sir John A. Macdonald Green and streetscape enhancements to existing streets that indicate the right-of-ways for cyclists through various forms, whether it be painted lanes or sharrows.

A comprehensive West Campus Servicing plan (see Figure 6-32, Page 181) ensures the future functionality of West Campus, while maintaining a safe pedestrian environment. As with Main Campus, the design of servicing functions needs to be thoughtfully considered and designed, so as not to disrupt the image and the quality of the campus setting.

Utilities

The Utilities Plan identifies existing systems and proposed solutions for Main Utilities (Water, Gas, Sanitary and Storm), Electrical Power Distribution, and Heating and Cooling. A Geothermal System is also proposed as a satellite system to that on Main Campus.

Chapter 7: Building Design Guidelines

The building design guidelines provide widely applicable built form direction to ensure campus developments are built to an appropriate standard that enhances the public realm and pedestrian movement patterns. The guidelines provide direction regarding:

- Architectural Expression
- Building Orientation and Massing
- Building Facades and Materials
- Building Interiors
- Sustainability
- Servicing and Utilities
- Parking

Chapter 8: Implementation

The Campus Master Plan identifies a long-term framework for growth that can slowly be achieved over many decades. This framework will be reinforced and achieved through countless decisions that impact campus-building, ranging from small-scale planting improvements to site selection for large development projects. As the campus evolves and grows, elements of this Plan will slowly be implemented to meet the ongoing needs of the University.

Within the context of the 50-year vision presented in the Vision chapter of this document, the Near Term Plan llustrates one potential evolution of the campus to reflect near term needs, opportunities and current initiatives.

While the Campus Master Plan is the official policy of the University, it will be a living document, adapting to emerging needs and institutional direction.

Part 2

Chapter 9: Precinct Plans

Part 2 of the Plan provides further implementation direction for specific development projects and initiatives. It is an integral part of the Plan, serving as a detailed implementation manual for Part 1. Part 2 provides design direction for new development and initiatives to ensure they are implemented within the larger campus planning framework and is intended to assist project managers and decision makers with decision-making around the growth and evolution of campus.

The Precinct Plan divides the campus into precincts in order to consolidate the opportunities and requirements for campus evolution on a place-by-place basis. The precinct plans essentially establish the rules for development and identify the enabling and coordinated projects that must be considered in new building and renewal projects.

Part 2 provides detailed input to potential projects, informing decision-making.

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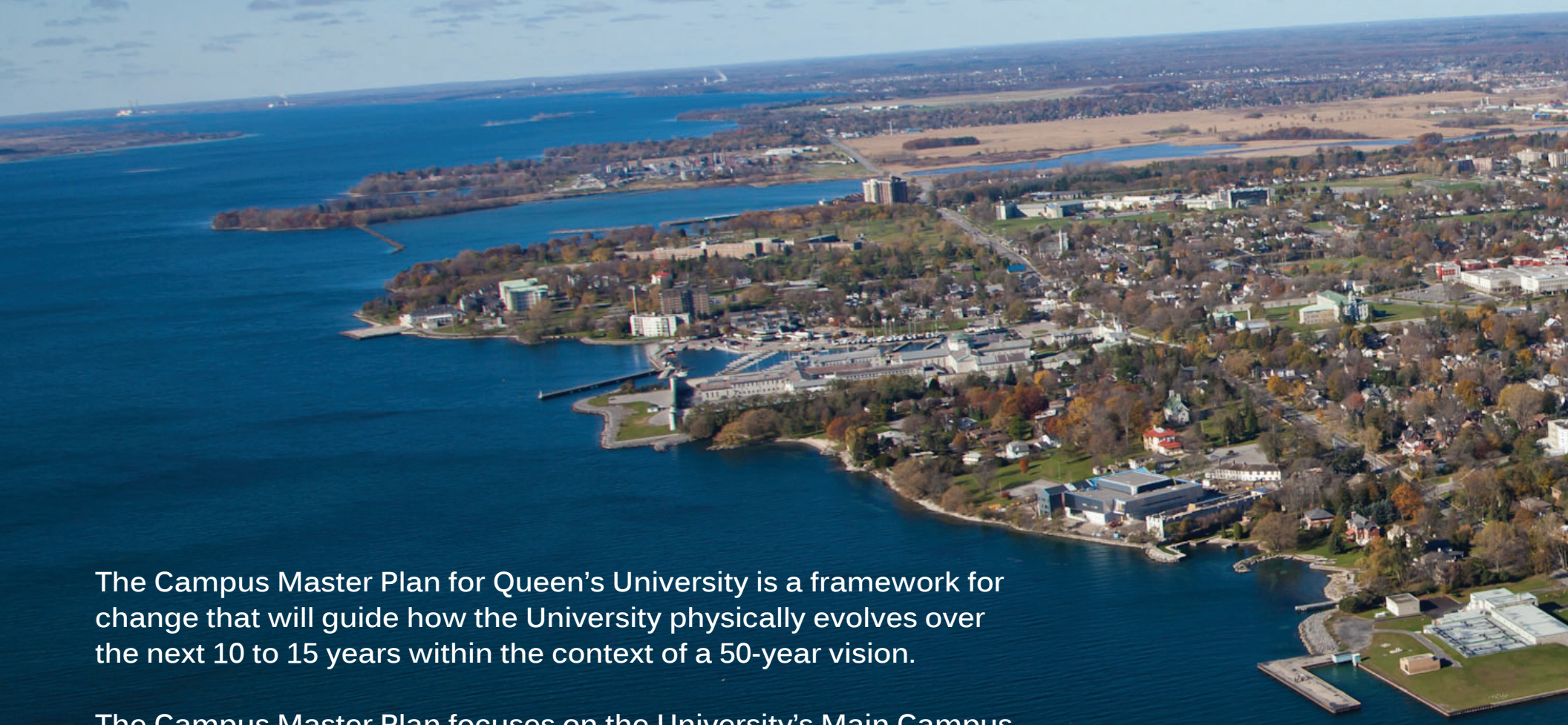
Queen's University

Campus Master Plan • Part 1



The Campus Master Plan for Queen's University is a framework for change that will guide how the University physically evolves over the next 10 to 15 years within the context of a 50-year vision.

The Campus Master Plan focuses on the University's Main Campus and West Campus but also includes recommendations pertaining to other University land holdings such as the Donald Gordon Conference Centre and the Isabel Bader Centre for the Performing Arts. The University's relationship to its physical context — the places, streets and infrastructure that are shared with its neighbours — is also addressed.

The vision and recommendations contained in this Plan will ensure that as the University physically evolves in response to contemporary learning, research, and social needs, its campus continues to be an exceptional place for students, faculty, staff and their neighbours.

1 Introduction

1.1 Study Process

The Queen's Campus Master Plan study process was conducted over a 15-month period, with completion in spring of 2014.

Regular meetings with the Campus Master Planning Advisory Committee (CMPAC) ensured that the Plan evolved in alignment with broader University objectives and responded to the needs of all users of the Queen's campus.

A comprehensive consultation program was developed to ensure the Plan was developed collectively with Queen's faculty and staff, students, Kingston residents, City staff and officials, and other interested parties. The consultation program consisted of numerous in-person and online engagement opportunities.

The in-person consultation program included three open houses, a public lecture, a series of stakeholder interviews, and a visioning workshop with invited Queen's and City of Kingston representatives.

The online engagement program provided an additional forum for community input. The University hosted a central website with access to study information and materials, while the Consultant Team managed a blog, Twitter account and Facebook page to share information, gather input, and host an ongoing dialogue about the physical campus and Queen's life.

Project Team

The Campus Master Plan study process was managed by a project team overseen by the Deputy Provost, consisting of University representatives from Physical Plant Services, Campus Planning, and Communications. The following is the membership of the project team:

- **Laeeque Daneshmend,** Deputy Provost
- **Tony Gkotsis,** M PL., '14
- **Yvonne Holland,** Campus Planning
- **Donna Janiec,** Associate Vice-Principal (Finance)
- **Charles Sumbler,** Senior Associate to the Provost
- **Craig Leroux,** Senior Communications Officer, University Communications
- **John Witjes,** Physical Plant Services
- **Robin Moon,** Group Manager, Electronic Communications, University Marketing
- **Julie Gutelius Clarke,** Business Officer/ Executive Assistant, Office of the Provost/ Planning and Budget

The University retained a team of experienced consultants with a range of skills and expertise to assist in the project. The team was led by Urban Strategies, providing expertise in planning, urban, and landscape design, Rickes Associates providing expertise in space programming, Betty Dion Enterprises for accessibility, Willowbank for built heritage, and Stantec for transportation, utilities, and environmental sustainability.

Campus Master Planning Advisory Committee

The process has been guided by the Campus Master Planning Advisory Committee (CMPAC), with representation from faculty, staff, students, community and alumni. The CMPAC was established by the Principal to provide ongoing oversight of the development of, and adherence

Each consultation event provided an opportunity at different stages in the process for the Queen's and Kingston communities to meet the project team and provide input into the development of the Campus Master Plan

to, campus planning policy and consisted of the following members:

- Toby Abramsky
- Aaron Ball
- Eril Berkok
- Yvonne Cooper
- Laeeque Daneshmend
- Leslie Dal Cin
- John Fisher
- Bruce Griffiths
- David Gordon
- Yvonne Holland
- Craig Leroux
- Sue Lounsbury
- Robin Moon
- Keith Pilkey
- Mary Purcell
- Martha Whitehead
- John Witjes

Other committees were regularly consulted throughout the project process, including:

- Board of Trustees
- Senate
- Vice-Principals Operations Committee
- Queen's University Planning Committee

1.2 Coordination with Existing University Policy and Other Projects

The Campus Master Plan is aligned with existing University policy, and has been coordinated with ongoing current planning initiatives. A full listing of of studies that have informed the creation of this Plan are listed in the appendix.

Existing University Policy

Academic Plan and Strategic Research Plan

Together, the Queen's Academic Plan (approved by Senate in fall of 2011) and the Queen's Strategic Research Plan (approved by Senate in the spring of 2018) provide a blueprint to ensure Queen's remains a balanced academy that offers an outstanding undergraduate experience enriched by high-quality graduate and professional programs within a research-intensive environment. The content of the Campus Master Plan has been developed to ensure the University's physical environment evolves in a way that support the principles and content of both these documents.

Comprehensive Strategic Framework for Accessibility and Queen's Accessibility Guidelines

The Comprehensive Strategic Framework for Accessibility enables the development and implementation of annual Accessibility Plans. The Queen's Accessibility Guidelines, published in 1997, provide guidance to the design of new facilities. The Campus Master Plan supports all new development and complies with the University's priorities and guidelines as identified in all documents. It is encouraged that the accessibility guidelines be updated to comply with current provincial standards as outlined in the Accessibility for Ontarians with Disabilities Act, 2005.

Sustainability Initiatives

Queen's has pursued a number of initiatives to target, plan and implement measures to decrease annual energy consumption and Green-House Gas (GHG) emissions. This has included small scale upgrades, retrofits and large scale studies to improve central systems serving both Main Campus and West Campus.

Sustainability Mission

To ensure the long term well-being of the Queen's University campus and community by creating a culture of sustainability that guides everyday activities to encourage conservation, innovation, and effective use of resources in facilities and operations, education and research, engagement and outreach.

Climate Action Plan

The Climate Action Plan identifies benchmarks, milestones and timelines to gradually reduce GHG emissions and energy consumption. Queen's University has committed to the plan for all existing facilities, proposed redevelopment and expansion.

A baseline was established for the University based on the GHG inventory in 2008 from which to measure future emission reductions. Between 2008 and 2010, Queen's has implemented measures which reduced GHG emissions by approximately 20%.

The targets set by the University are as follows:

- 35% reduction by 2020
- 70% reduction by 2030
- 100% reduction/climate neutrality by 2040

Sustainability Strategic Framework

The Sustainability Strategic Framework sets out a system in the pursuit of sustainability and performance upgrades.

The framework establishes the following and is designed to bring together all interested parties within the greater University community:

- An organizational structure
- A project exploration process
- Guiding principles

Other Projects

Active development projects, including two new residences buildings on Main Campus and plans for a new stadium and sports facilities on West Campus, have been integrated into the Campus Master Plan, while other planning documents and guidelines were considered in order to ensure complementary recommendations and directions. The following is a summary of other major University planning documents which have guided the development of this Plan.

Library and Archives Master Plan

The Queen's Library and Archives Master Plan (LAMP) began in May of 2012 and was approved by the Board of Trustees in December, 2013. The LAMP will guide the development of Queen's Library and Archives facilities over the next 20 years, in the context of the University's strategic framework. The Campus Master Plan project team and consultants have worked closely with the LAMP team and consultants to ensure consistency and complementary policies in both plans. The Campus Master Plan incorporates LAMP initiatives such as the re-imagining of the Union Street and University Avenue as "Library Square" as well as the Library Information Network at Queen's (LINQ) concept.

Library and Archives Master Plan

1.3 The Study Area Today

Situated on the traditional lands of the Haudenosaunee and Anishnaabek, the primary focus of the Campus Master Plan is Main Campus and West Campus, the University's two largest land holdings. These are where the majority of day-to-day activities take place today and are expected to in the future. The Plan also considers the physical relationships with other Queen's land holdings including the Donald Gordon Conference Centre and the Isabel Bader Centre for the Performing Arts. Each campus is a distinct place and contains its own strengths, opportunities, and challenges.

Today, the Main Campus is highly valued by students while West Campus is seen as a distant location, isolated from Queen's life.

With an array of gathering places, great proximity to Downtown Kingston and Williamsville, and historic buildings, Main Campus already has many assets. However, change here will be challenging as there are very few remaining development sites.

West Campus is farther removed from the core of the City, and lacks many of the same social infrastructure and gathering spaces as Main Campus. However, it is located in proximity to Portsmouth Village and, has a large amount of land available for development. With the recent redevelopment of Richardson Stadium site and the installation of the multi-purpose sports field at its northern portion, change on West Campus has already begun. Changes nearby on non-University land holdings, such as the decommissioning of the Kingston Penitentiary for Men and the anticipated redevelopment of the former Prison for Women site, provide significant opportunities for change for this area of Kingston.

With each campus providing a different set of challenges, a different approach was required to envision the future of each setting.

Figure 1-1
The Study Area

WILLIAMSVILLE
UNIVERSITY AVENUE
DIVISION STREET
PRINCESS STREET
DOWNTOWN KINGSTON
JOHSON STREET
SUNNYSIDE
SYDENHAM WARD
UNION STREET
MAIN CAMPUS
BARRIE STREET
WEST STREET
ALWINGTON
KING STREET
LAKE ONTARIO

1.4 Why a Plan was Needed

With the rise of new technologies, increasing global competitiveness, and changing pedagogical models, this is a time of dramatic change and opportunity at Queen's. It is also a time of limited resources. Balancing these opportunities and constraints, the University must carefully assess its goals and objectives for the future of its campus. Future investments must be carefully considered to ensure the greatest return on investment while simultaneously addressing contemporary needs and ensuring flexibility for the future.

The Campus Master Plan has been initiated in order to:

Ensure capacity for growth

With Main Campus nearing capacity, there is a need to identify the location of additional capacity across Queen's multiple land holdings. This Plan provides a base understanding of the type of development appropriate for each site as well as other considerations regarding form and character.

Define priorities for renewal

The renewal of the Queen's campus, in the form of repairs, redesign, new buildings, or retrofits, must be carefully considered to ensure deferred maintenance is addressed. Based on a comprehensive analysis of facility assessments, this Plan will help the University prioritize and coordinate investment in both the short and long term.

Protect heritage resources

The Queen's campus contains many highly valued historic buildings and landscapes dating back to 1834. This historic fabric is one of the most memorable aspects of the Queen's experience and must be protected. This Plan identifies places that require preservation or special consideration, and provides recommendations as to how to renew facilities in a cost effective manner that does not compromise the qualities that make these places special.

Align development with landscape and infrastructure investment

Incorporating landscape projects into development plans ensures a cost-effective way to improve the campus' public realm and operating systems. This Plan identifies public realm, streetscape, public art, and other infrastructure improvements alongside recommendations for new facilities and renewal projects.

Continue to build a remarkable campus

Like master plans before, this Plan will continue to protect what is loved about the Queen's campus, while ensuring new facilities contribute to the University's local, national, and global competitiveness. This will be achieved through design guidelines and policies ensuring the highest quality design of buildings and public spaces.

1.5 How to Read this Document

Part 1

Part 1 provides a vision for Main Campus, West Campus and the City lands between. This includes recommendations for the different systems that make up the overall physical campus structure, such as open space and movement networks, as well as guidance regarding the location and characteristic of new development.

Chapters 1 and 2:

Introduction and Existing Campus Conditions and Needs

Chapter 1 outlines the process involved in creating this Campus Master Plan update. Chapter 2 documents the historic evolution of Queen's campus planning, provides an overview of the existing physical condition, capacity and quality analysis, and a summary of anticipated space needs and trends informing the Plan.

Chapter 3:

Campus Vision

This chapter outlines a high level direction for the evolution of Queen's physical setting, described through guiding principles and images. The physical vision informs the detailed framework recommendations provided in the Main and West Campus Master Plans.

Chapter 4:

The Campus at the City Scale

This chapter provides a framework for campus systems and networks – such as movement, parking and street character – at the city scale. It also provides guidance regarding the physical aspects of the University that have impact on surrounding neighbourhoods and the city-at-large, such as housing.

Part 2

Part 2 serves as an implementation manual for the plan, providing specific design direction for University projects.

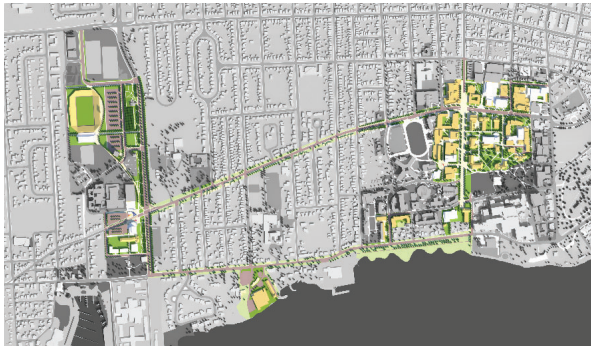
Chapters 5 and 6:

The Main and West Campus Master Plans

The Main and West Campus Master Plans provide direction regarding all the change that will occur on each campus. Each chapter is divided by the different systems that make up the overall physical structure of each campus, including land use patterns, heritage, development sites, and movement.

Chapter 7 and 8:

Building Design Guidelines and Implementation



Chapter 7 provides general building design guidelines and Chapter 8 describes how the Campus Master Plan should be used and maintained by Queen's.

Chapter 9:

Precinct Plans

The precinct plans provide a convenient and simplified framework in which to plan and evaluate campus projects within the comprehensive guidelines of the Master Plan. While illustrating the inter-related nature of the campus environment, they consolidate the opportunities and requirements for campus evolution for each renewal and development site on a place-by-place basis.

Existing Campus Conditions and Needs

2

2.1 An Evolving Campus

We are at a period where significant cultural and societal shifts are beckoning a re-assessment of how to maintain Queen's competitiveness, and ensuring the campus meets the needs of today's and tomorrow's students, faculty and staff. In a time where new economies, technology, and global migration patterns have radically shifted the way people learn, research and innovate, Queen's must continue to evolve. This chapter documents the historic evolution of Queen's campus planning, provides an overview of the existing physical condition, capacity and quality analysis, and a summary of anticipated space needs and trends informing the Plan.

Since Queen's inception in 1841, the physical campus has grown and evolved incrementally, while still retaining a close physical relationship to Kingston's neighbourhoods. New spaces and facilities have responded to shifts in pedagogy, demographics, and a changing university culture.

Since the 20th Century, Queen's has been managing growth and change through a series of master plans that have responded to the issues of their time. Remnants from plans of the past can be seen in today's buildings, open spaces, and pathways. The following highlights some of the plans over the years and the legacy that they have left behind.

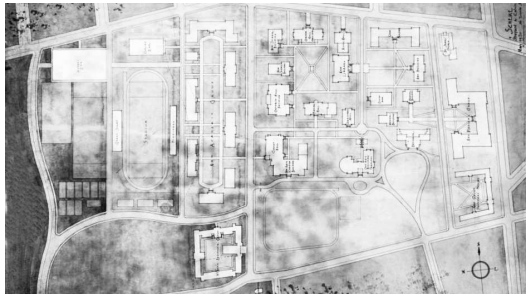
1841

Queen's University is established

The first formation of the Queen's campus began shortly after the young institution acquired Summerhill, the estate of John Okill Stuart in 1853. This began the formation, over the next century, of the central Queen's campus as currently understood and experienced.

1920

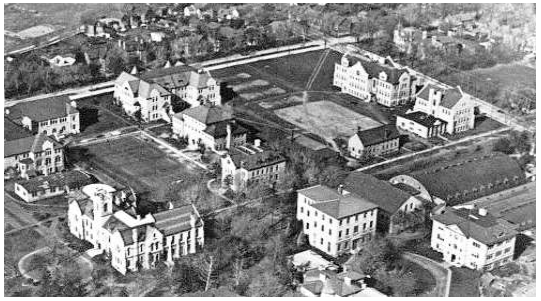
Sheppard and Calvin Campus Master Plan



The Sheppard and Calvin Plan envisioned a grouping of new buildings in what was referred to at the time as "North Campus" and the area west of University Avenue. This Plan informed the development and location of some of the buildings on the west side of University Avenue, including the current location of Ban Righ Hall.

1945

The Todd Campus Master Plan



Canadian landscape architect and planner Frederick Todd envisioned an east-west road between Ontario Hall and Alfred Street. While this road was never constructed, the route informed the siting of Richardson and Ellis Halls.

1955

Culham Campus Master Plan

In 1955 Queen's University retained landscape architect Gordon Culham to prepare a plan for the campus lands. His plan addressed the need to re-evaluate how campus buildings addressed the pedestrian network and internal courtyards and how to more sensitively incorporate parking into University life.

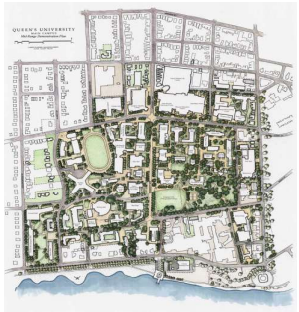
1961

Barott, Marshall, Merret and Barott Campus Master Plan

In response to the rise of the automobile, the Barott, Marshall, Merret and Barott Plan envisioned an inward facing campus, with surface parking lots located at the periphery. Remnants from this plan can be seen in the existing parking lot west of Tindall Field. The effects of this plan compromised the pedestrian-scaled nature of Queen's and disconnected the campus from many of its neighbouring communities.

1993 and 2003 Update

DTAH Campus Master Plan



DuToit Allsopp Hillier (DTAH) switched focus from modern buildings and parking lots to protecting the heritage buildings and landscapes at Queen's. Expansion was achieved through infill development, working within the existing urban street network. University Avenue and Union Street were envisioned as the centre of campus. The plan was updated in 2003, reflecting the current practice to update master plans on a five or ten year basis.

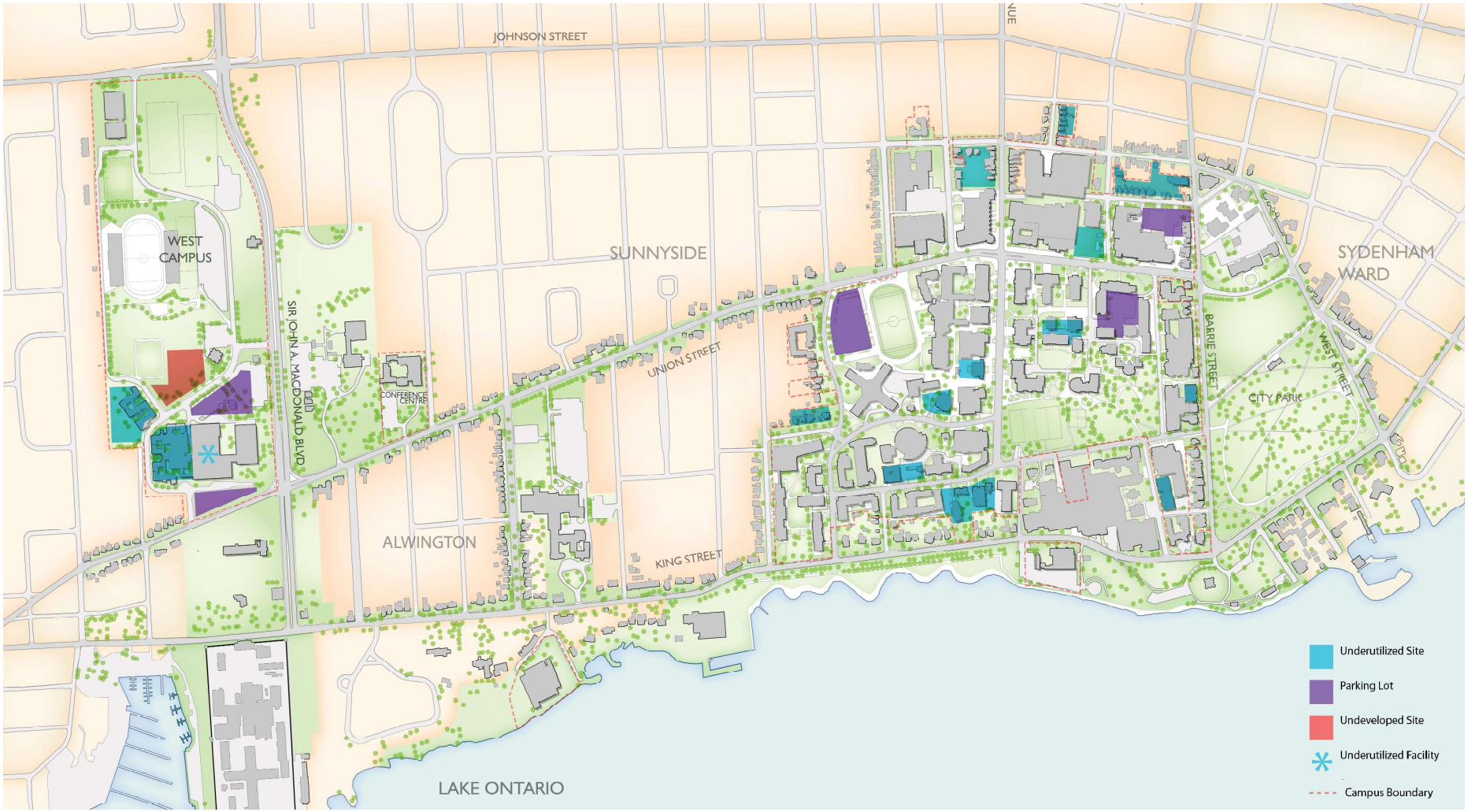
*Research courtesy of Tony Gkotsis, M.Pl '14

2.2 Determining Capacity and Promoting Renewal

In order to fully understand the potential of Main and West Campus, existing conditions were analysed through a number of different lenses to determine the places on both campuses suitable for change. This section reviews the different steps in determining the University's existing capacity.

Land Utilization

Each property has been assessed to determine sites on campus that are underutilized. Sites were considered underutilized if they are undeveloped, only partially developed, or contain low density/ obsolete buildings that could be redeveloped to perform better. Surface parking lots were also identified as sites that could be put to a better use.



▲ Figure 2-1
Land Utilization

Building Condition

To determine if any existing buildings should be considered for renewal, the building condition of each building was evaluated using existing Building Condition Assessments that utilize the Facility Condition Index (FCI) to rank buildings on campus. The FCI is calculated using the ratio of deferred maintenance (cost of repairs) divided by the replacement value (the cost to replace the entire building in today's dollars). Based on its index, an individual building is categorized as good, fair, poor, or critical. Those buildings with a critical FCI are considered sites which may be suitable for redevelopment as the cost of repair exceeds its current value. The building condition analysis did not include recently constructed buildings or residences, as these were assumed to be in good condition. Of the 81 buildings studied, roughly 50% were assessed to be in fair or good condition.

▲Figure 2-2
Building Condition

Historic Significance

Buildings were assessed for their historic significance in order to fully understand the highest development potential on campus. Each building on campus was evaluated based on individual architectural significance, as well as its contribution to Kingston's historic landscape (the rationale in determining historic significance of buildings is described in fuller detail in Section 5.2). Buildings in the drawing below in blue are those that must be protected or incorporated into new development. Houses in purple indicate sites that may be considered for redevelopment, but will require special design attention regarding compatibility with adjacent historic neighbourhoods.

▲Figure 2-3
Historic Significance

▲ Figure 2-4 **Development Capacity on Main Campus**

Development Capacity

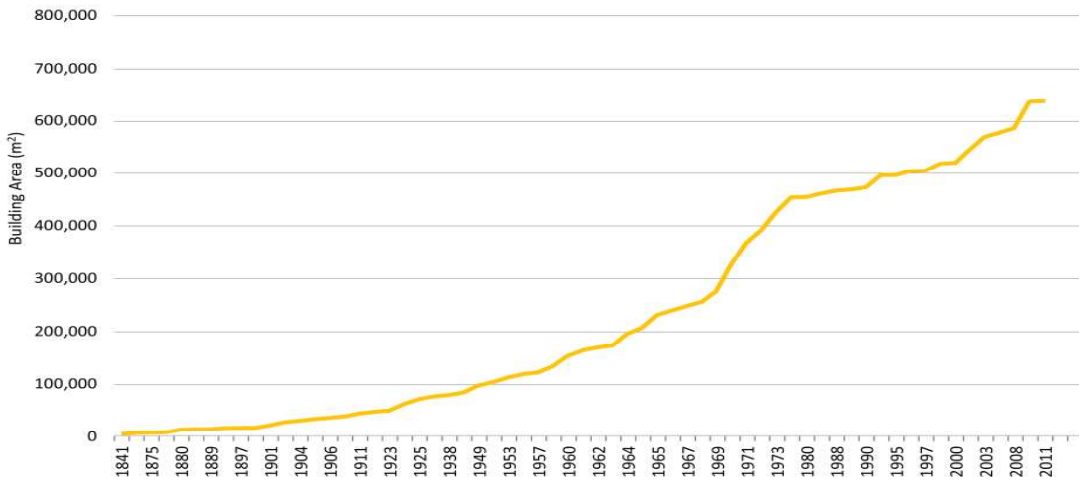
All of the determination criteria have been considered against one another to arrive at total development capacity numbers on campus. These were then conceptually modeled on a site-by-site basis to determine the total gross floor area potential across campuses. Development opportunities consist of three types of sites and have been separated across Main and West Campus:

	Main Campus Capacity	West Campus Capacity
Large Vacant Sites: These are less-constrained sites that can be considered for more immediate and less-constrained sites for redevelopment. These are places that can accommodate modern academic buildings.	46,000 m² (495,140 ft²)	60,000m² (645,834 ft²)
Large Sites with Considerable Constraints: These are clusters of buildings and vacant land with financial or logistical constraints such as demolition, phasing, or historic buildings to be retained and incorporated into new design.	12,000m² (129,166 ft²)	29,000m² (312,153 ft²)
Small Sites with Considerable Constraints: Smaller clusters of buildings and vacant lands with similar financial or logistical constraints. None of these types of development sites exist on West Campus.	22,000m² (236,806 ft²)	0m² (0 ft²)
TOTAL	80,000m² (855,112 ft²)	89,000m² (967,987 ft²)

Figure 2-5 Development Capacity on West Campus

2.3 Evolving Space Needs

The Queen's "footprint" has steadily increased over time, having grown an average of 9,000 to 10,000 square metres per year since World War II to arrive at its current area of 681,5000 square metres. Though Queen's has grown steadily in the past, Queen's future growth will be determined by the University's enrolment plans over coming years and other strategic planning decisions. The Campus Master Plan does not presuppose growth, but illustrates potential physical opportunities and challenges, should the University choose to grow.



▲ Figure 2-6
Growth in the Building Area Over Time

Regardless of future enrolment, rapidly evolving pedagogy has created a need for Queen's to asses current space requirements. An analysis of space needs was conducted by Rickes Associates Inc. in August 2013* to assess existing and required facilities to support research, teaching, and campus life. The findings indicate Queen's does not have a deficit of space overall, but rather, it requires more of certain types of spaces and less of others. The renewal and retrofitting of existing spaces will be required to meet pedagogical and technological evolution.

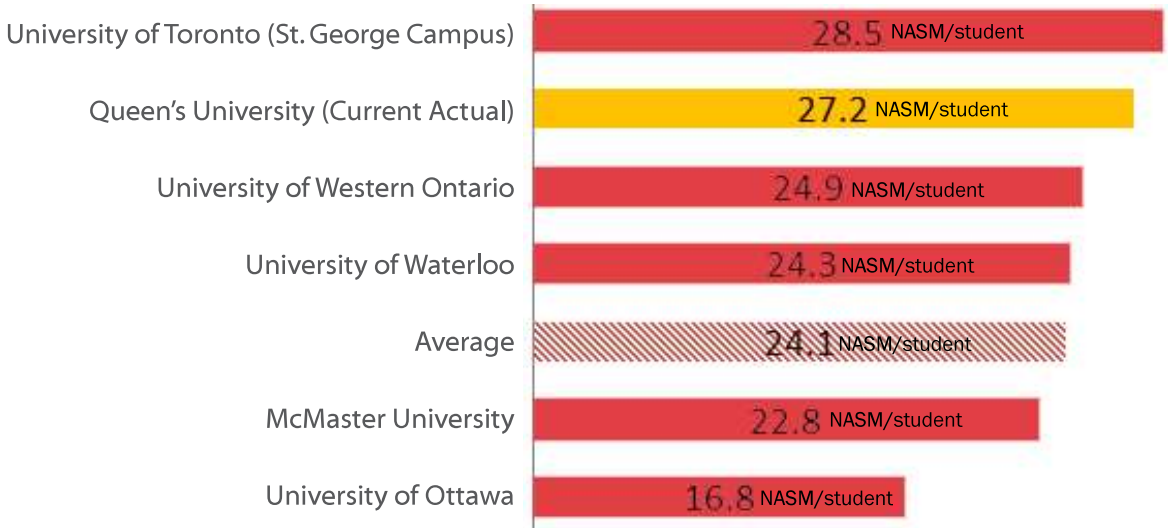
ECS is currently preparing a utilization study of both centrally and non-centrally booked classrooms at Queen's to determine whether the University has the appropriate number and mix of sizes of classrooms. This study will provide an overview of classroom inventory by building, capacity, capacity range, room type and room characteristics along with a breakdown of both time and seat utilization. This will inform the University as to whether additional teaching space is required, and if so, the approximate sizes and types of these rooms. Future analyses may include both an overall review of the quality of each of Queen's teaching

spaces (which will inform future projects that would bring these rooms up to current teaching standards), as well as a review of time utilization of existing classrooms (which may inform the decision to extend the number of hours that they are used i.e. additional evening teaching will reduce the requirement for additional construction).

Current Performance

To date, Queen's has done a relatively good job of maintaining the appropriate amount of facilities in relation to its enrolment. The space analysis used a number of points of comparison to evaluate how Queen's space supply compared to other institutions in USA and Canada, as well as Council of Ontario University standards (performance standards developed by the organization that co-ordinates and advocates on behalf of Ontario's 20 publicly funded universities). The analysis concluded that while it does have deficits for some types of space like all the other institutions, Queen's is among the top at offering appropriate amounts of space to students.

Should enrolment increase in the future, roughly 20 net assignable square metres (NASM) of space would be required per additional full time enrolment (FTE) as a general rule of thumb. This translates into approximately 30 gross square metres of development per FTE.



▲ Figure 2-7

Space benchmarking relative to other Ontario universities. This figure illustrates the amount of facility space per full time student for a sampling of Canadian universities, measured in net assignable square metre (NASM/student).

*Findings in this section refer to *The Queen's University Campus Master Plan Analysis of Space Needs,* Rickes Associates Inc., August 2013

Space Needs

Regardless of Queen's good performance, there are still types of spaces that should be added to its campus. The University currently lacks appropriate instructional and research laboratory space, classroom facilities, and study space, as well as social spaces that support Queen's role as a predominantly residential campus. These spaces should be considered and prioritized in future development. In particular, a phasing and implementation plan should be developed identifying the specialized instructional spaces that are candidates for right-sizing, maintenance and other upgrades. This Plan would consider the enrolment, course scheduling, and potential need for expanded facilities to support new programs, adjusting as the institution changes. Ultimately, this will provide Queen's with the appropriate array of specialized instructional spaces, both now and in the future.

Renewal

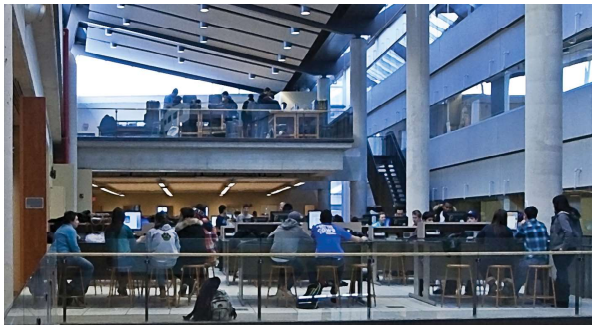
Queen's challenge is not necessarily to build new facilities (though for certain types of large, purpose-specific spaces this will be necessary), but rather, how to renew and retrofit existing facilities to align with current space needs. This means re-assessing how certain spaces might be re-purposed, or performing interior upgrades and renovations.

Queen's should carefully review appropriate options for addressing current need by balancing the creation of new space with renovation of older spaces (guiding by the building condition assessment presented on page 20), and the opportunity to eliminate outdated or poorly located rooms. It is not simply a matter of having a sufficient quantity of space, but they must be of an acceptable quality if they are to be used at all.

The Nature of New Spaces

A symbiotic convergence of cultural shifts and technological changes is transforming higher education, disrupting not just the traditional "in-person" method for course delivery, but also the traditional spatial organization and disciplinary silos and the experience of academic life more broadly. These changes - inclusive of new permutations, yet to be imagined - suggest a significant need to examine the value of the physical campus and its collection of spaces. Chief among cultural shifts impacting higher education are large-scale, wide-ranging pushes toward greater collaboration and flexibility reflected and refracted in numerous ways.

As teaching and learning evolves, the nature and character of space needs are changing. Whereas campus space planning of the past focused on categorizing spaces with a particular programming purpose, new learning and research spaces are more so defined by their quality and characteristics – places for gathering or working individually, loud spaces or quiet spaces. New spaces will need to respond to existing learning trends and also be flexible to



New ways of working and collaborating are changing the type and configuration of space Queen's requires.

anticipate further changes, new technologies, and the uncertain needs of both future Queen's staff and students. New spaces should prioritize flexibility, mixed and overlapping uses, multiple loci of activity, and the convergence of functions and services. By creating these sorts of "fusion spaces", the University can eliminate redundant space, increase the utilization of facilities, and potentially save future costs.

Student demographics are also changing the future. Queen's students will likely be somewhat older and increasingly diverse and Queen's will be challenged to accommodate these new students, which may include providing space for graduate students; special-interest, religious, and cultural groups, clubs and events; as well as amenities such as family housing, child care facilities and medical facilities to support adult students. Attracted by life-long learning opportunities, aging baby boomers may be attracted once again to university life, further extending the range of ages served by the campus and creating the need for specialized dining, recreational, and care facilities.

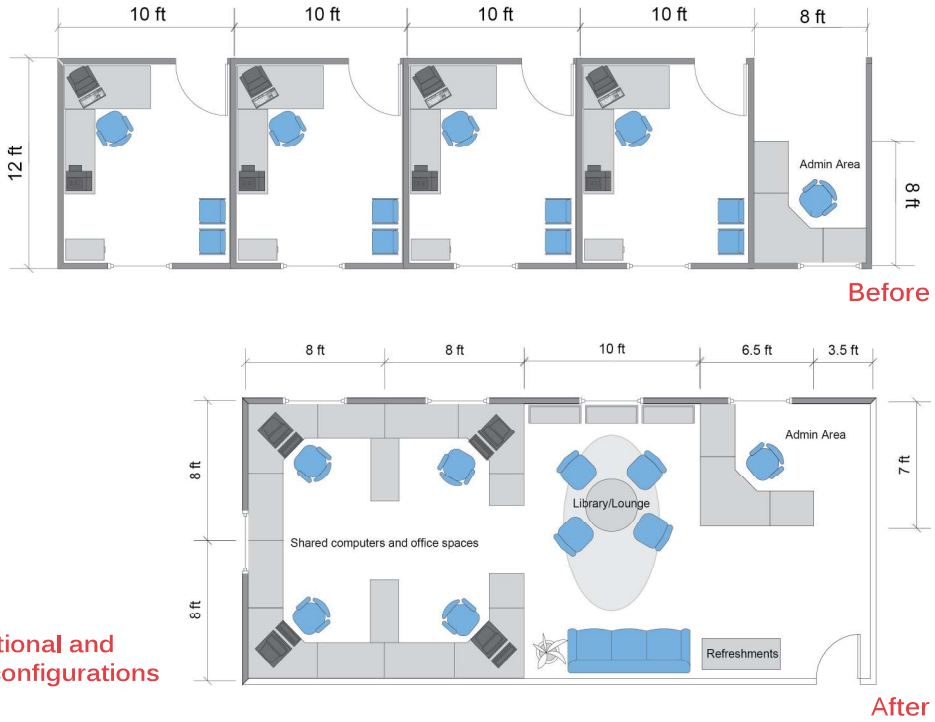


Figure 2-8

A comparison of traditional and contemporary office configurations

This chapter outlines a high level direction for the evolution of Queen's physical setting, described through guiding principles and images. The physical vision informs the detailed framework recommendations provided in the Main and West Campus Master Plans.

Campus Vision

3

3.1 Planning Principles

The planning principles define the assumptions and philosophies driving the vision and recommendations of the Campus Master Plan. They also provide a means of evaluating future Campus Master Plan updates and possible amendments.

Planning Principle 1

Support Queen's academic mission

Queen's delivers an exceptional student experience, attracts and cultivates excellence and leadership, and pushes the boundaries of knowledge through research. The Campus Master Plan helps Queen's be the university for the future with people who will solve the worl'ds most significant and urgent challenges.

1.1 Align campus planning with the University's teaching and research mission

1.2 Align campus improvements and development with the University's Strategic Goals, Vision, Mission, Values, and Plans.

1.3 Respond to evolving pedagogy, research, teaching and learning needs by providing state-of-the-art facilities, technological support, and ancillary amenities

1.4 Create inclusive, open, adaptable learning environments that promote collaboration and innovation

Planning Principle 2

Enhance the campus experience

The Queen's campus, with its iconic limestone buildings and inviting green spaces, is a vital part of our heritage and identity. The Campus Master Plan will preserve this remarkable legacy while enhancing the livability of our campus locations.

2.1 Protect Queen's architectural and historic legacy, and its cultural landscape, while enhancing areas in need of improvement

2.2 Ensure the campus is accessible, adhering to existing campus policy and guidelines regarding universal design

2.3 Enhance campus safety through design

2.4 Support Queen's role as a residential university by offering a range of housing options, social spaces and services for students, staff, faculty and the community

2.5 Improve the quality of the West Campus experience

2.6 Queen's is one campus with several locations; improve connections between those locations to enhance continuity and facilitate movement

2.7 Tell the rich stories of Queen's, Kingston and Indigenous Peoples, their histories, perspectives and contemporary issues, through public art and design.

2.8 Promote Indigenous initiatives in the campus built environment, including Indigenous-marked spaces to hold ceremonies and events

Planning Principle 3

Promote good facilities management

Buildings and landscapes endure for decades, even centuries. The Campus Master Plan encourages careful steward-ship and smart investment to meet the University's current and future needs.

3.1 Act as stewards of our land and consider the best use of that land over time

3.2 Ensure flexibility to respond to changing projections for growth

3.3 Assess sites for potential renewal in the context of a full range of issues and objectives, including building maintenance and site capacity

3.4 Identify opportunities to leverage equity in property and lands

3.5 Ensure higher energy performance standards and technologies are integrated with improvement projects

Planning Principle 4

Foster a more sustainable campus

Sustainability is an important value for Queen's. The Campus Master Plan aims to lessen the University's impact on the environment through good planning, stewardship and development practices.

4.1 Promote green building technologies in new and renewed development

4.2 Improve active transportation infrastructure, including cycling routes and pedestrian pathways

4.3 Invest in buildings and landscapes of enduring quality

4.4 Direct new development to sites already accessible to services, facilities, and infrastructure systems

4.5 Diversify and integrate campus uses to create complete campus communities

4.6 Encourage public transit by working with Kingston Transit and ensuring transit waiting areas are safe and comfortable environments

4.7 Integrate traditional Indigenous plants across campus

Planning Principle 5

Integrate the campus with its settings

Queen's is fortunate to be situated in Kingston, on the traditional lands of the Anishinaabe and Haudenosaunee, and in proximity to historic neighbourhoods, waterways, and numerous parks. The Campus Master Plan aims to enhance Queen's connection with its surroundings in ways that are sensitive to the uniqueness of our location.

5.1 Enhance connections to Lake Ontario through new pathways and careful placement of new buildings

5.2 Ensure new development transitions sensitively to adjacent residential neighbourhoods and parks

5.3 Seek partnerships and city-building opportunities with the City of Kingston

5.4 Partner with the City to create a diversity of housing opportunities that minimize strain on stable residential neighbourhoods

5.5 Explore opportunities to integrate non-university uses on West Campus

5.6 Continue to co-ordinate infrastructure projects with the City and Kingston General Hospital.

5.7 Continue to develop and strengthen relationships with Indigenous communities.

Planning Principle 6

Create a campus that supports health and wellness

Our physical campus and the location of services and amenities can play an important role in promoting the health and wellness of our students, staff and faculty. The Campus Master Plan envisions a campus which is conducive to physical and mental wellbeing.

6.1 Create a diversity of open spaces, including Indigenous spaces, that offer places to rest, play, and learn

6.2 Ensure convenient access to healthy food across campus

6.3 Integrate physical and mental health services across campus

6.4 Enhance infrastructure and services to promote active transportation such as walking and biking

6.5 Develop a health and wellness focus on West Campus

3.2 The Long-term Vision for Queen's Campus Lands

Queen's University is an institution with a rich legacy, reflected in its traditions, setting and historic campus places. It is also a forward looking institution that promotes a transformative learning experience balanced with and enhanced by excellence in research and the advancement of our collective knowledge.

Though the campus has and will continue to evolve, Queen's University will always be a place recognized by returning alumni. The essential qualities of its identity will endure, yet many facilities and places will have been renewed to reflect contemporary teaching and learning objectives. The physical and programmatic relationships between Queen's various campus locations and facilities will be strengthened. The University will have evolved in step with its neighbouring communities, preserving historic assets, respecting physical relationships and supporting community life.

As Main Campus becomes more built out, West Campus will play an increasingly significant role in the life of the University. Main and West campuses will complement each other. Each will have a unique role and identity, but the quality of experience, although not the same, will be equivalent.

Growth will have occurred where required, but the majority of change will be a result of renewal. The changes illustrated in Figure 3-1 represents the full range of opportunities that Queen's may consider - demonstrating how building, open space and infrastructure projects can be realized in a holistic manner. Over the coming decade, Queen's will be able to prioritize these projects and initiatives, selecting which are to be implemented with confidence that the physical implications of these projects has been fully explored and documented within the Campus Master Plan.

Figure 3-1
Long-term Vision for Queen's Campus Lands

The long-term vision illustrates the full-range of development and open space opportunities described in this plan. Buildings in white illustrate potential new buildings, while existing buildings and those under construction are illustrated in yellow.

3.2.1 The Vision for Main Campus

To students, staff, faculty and alumni alike, Main Campus will continue to be understood as the symbolic heart of the University's identity. The physical aspects of this "traditional campus" – iconic architecture and picturesque open spaces situated on a compact, walkable street and pathway pattern – will be maintained, however uses will evolve.

Services and programming will be dispersed across the campus reflecting the growing diversity of the Queen's community and an increasingly integrated and collaborative style of learning and research. This evolution will be reflected in an increase of multi-disciplinary and flexible spaces.

With a limited amount of space left on Main Campus, new facilities and uses will be of the highest and best use for their location, and will mostly be in the form of facility upgrades and building expansions that respect the existing character of campus, alongside modest amounts of new development.

The Main Campus will be better integrated within its setting with campus landscapes and streets seamlessly transitioning to the surrounding communities and open spaces. The pedestrian and cycling environments will be improved and better balanced with local and city vehicular movement patterns. A University shuttle will connect Main Campus to West Campus, the Isabel Bader Centre for the Performing Arts and the Donald Gordon Conference Facility, improving access to both facilities and parking.

Figure 3-2
Main Campus Vision

Bader Lane
Stuart Street
King Street

3.2.2 The Vision for West Campus

West Campus has long been perceived as isolated from the majority of campus life and disconnected from the central part of Kingston. While some growth and change of past years has sought to remedy this sense of isolation, there is still a long way to go. The West Campus of the future will see a number of new uses and destinations, better services, new public spaces and an improved mobility system.

West Campus will have a new and unique character, distinct from Main Campus. It will be a 24 hour mixed-use campus, supporting a full range of activities including teaching, research, and housing. West Campus will become a hub of activity that embraces the community around it, and provides amenities and activities to support Portsmouth and other nearby communities. It will continue to be a place for large scale, space intensive uses such as athletic fields and parking, as well as a location for administrative offices and service functions that do not require placement on Main Campus.

With its existing sports fields and potential for other public spaces to promote healthy living, it will have a focus as a health and wellness campus, potentially hosting clinics and other health related facilities. It may also be the place for innovation facilities that partner with the private sector or that serve the broader Kingston community.

Figure 3-3
West Campus Vision

Yonge Street
Union Street

Living wall at Beamish-Munro Hall

3.2.3 Sustainability Vision

Reflecting this Plan's guiding principle to foster a more sustainable campus, the Campus Master Plan aims to lessen the University's impact on the environment through sound planning, stewardship of valued natural resources, and green development practices. An holistic approach to sustainability means ensuring sustainable principles are considered in every aspect of campus development.

Accordingly, recommendations to reduce impacts on the environment and promote resilient campus-building have been integrated into every chapter of this Plan:

Section 1.2, Coordination with Existing University Policy and Other Projects, provides an overview of existing University policies and documents that have been considered in the development of this plan.

Section 2.3, Evolving Space Needs, provides a summary of the type of flexible spaces that new facilities should include to ensure new development does not become obsolete.

Chapter 4, the Campus at the City Scale, provides co-ordinated movement networks that promote safe, comfortable and attractive environments to ensure walking, cycling and public transit are desirable movement choices for the Queen's community. It also directs housing to areas on or close to campus so students and staff can live in a pedestrian-oriented environment close to amenities, reducing dependency on the private automobile.

Chapters 5 and 6, The Main Campus and West Campus Master Plans, implement sustainable development at a more local scale. The movement networks introduced in Chapter 4 are supported by recommendations to ensure balanced transportation infrastructure and facilities that support all modes of travel, with a priority on pedestrian and cyclist safety. Sections 5.4 and 6.4, Open Space Network, seek to enhance the existing open space network through the addition of new open spaces as well as design enhancements that benefit the environment, such as the addition of native species to support bio-diversity and healthy ecosystems, plants of value to Indigenous traditions and medicine and the creation of Indigenous gardens, material treatments that reduce or filter storm-water runoff, and an increased tree canopy that contributes to reducing the heat island effect. Sections 5.6 and 6.6, Utilities, recommend small scale upgrades, retrofits and new systems that will decrease annual energy consumption and Green-House Gas emissions

Chapter 7, Building Design Guidelines, provide performance standards for new development that promote green building, as well as ways new development should be massed and oriented in a way that enhances the pedestrian experience.

3.2.4 Accessibility Vision

Queen's University is committed to building a campus community that is inclusive for all individuals, and ensuring that its services and spaces are accessible for persons with disabilities to achieve success in their academic and employment endeavors.

This policy is reflected in the Campus Master Plan planning principles. Specific reference to improving accessibility in both existing and proposed environments is made in the General Landscape Guidelines **(Section 5.4)** and Building Design Guidelines **(Section 7.1)**.

In the future, all new development and campus improvements will comply with the Queen's Accessibility Guidelines, and the University will continue to take steps to improve accessibility in existing facilities.

Wheelchair accessible facilities at the Queen's Athletics and Recreation Centre

The Campus at the City Scale

4

Queen's is an urban University centrally located in Kingston. Decisions made by the University have an impact on adjacent neighbourhoods, and the state and health of adjacent neighbourhoods affect the image of Queen's and its ability to attract future students and faculty. There is a need for co-ordinated planning to ensure mutual benefit between the City and the University.

In addition, as a University with two campuses, the neighbourhoods between these campuses becomes a daily part of the Queen's experience. There is a need to think holistically about the relationship between campuses and the neighbourhoods surrounding them and how campus-wide systems can be co-ordinated to better integrate the two campuses.

This section provides a framework for campus systems and networks – such as movement, parking and street character – at the city scale. It also provides guidance regarding the physical aspects of the University that have an impact on surrounding neighbourhoods and the city-at-large, such as housing.

Building on existing University and City initiatives, the recommendations put forward in this section are intended to complement the vision and policies prepared by City staff and the Kingston community who have been consulted throughout the study process. While this chapter's content has been developed in consultation with City staff, it has not been officially endorsed. Realization of the recommendations in this section will require continued co-operation between Queen's, the City, and the community. Our intent is to clarify objectives and provide direction, rather than present prescriptive design solutions.

4.1 City Initiatives

The City's vision for the University and surrounding lands can be ascertained through a number of City plans, studies and capital projects. These initiatives help the University understand the City's goals and intent for various areas around campus. Understanding the City's priorities will help foster a spirit of co-operation between both parties and, through continued consultation and co-operation, provide opportunities for mutual benefit.

The City policy and projects illustrated in Figure 4-1 to the right can be understood in three categories:

Appropriate places for change

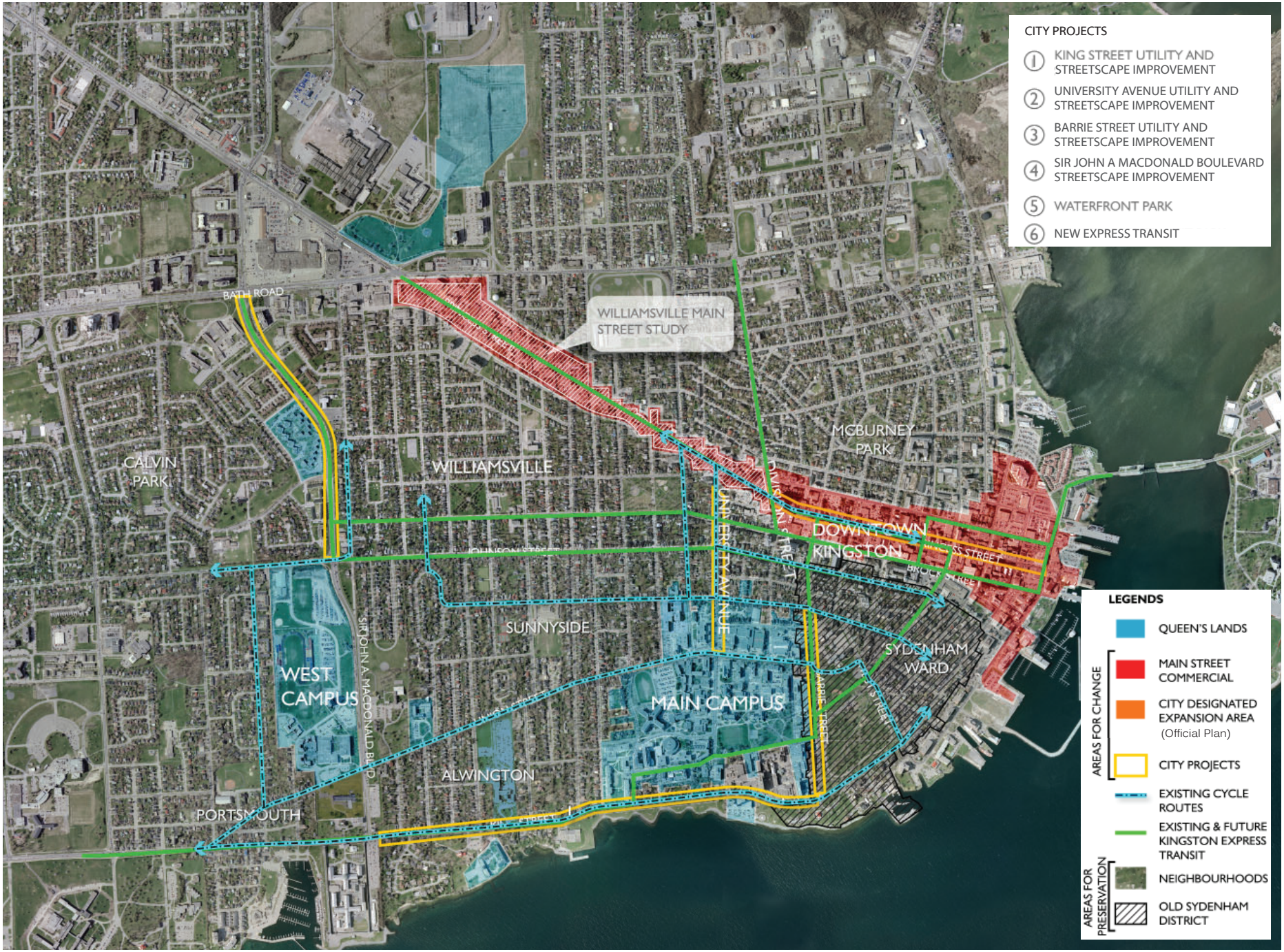
These are lands that are envisioned to be put to a better use, or that require significant physical improvements. These include the Williamsville portion of Princess Street, a corridor envisioned for mid-rise intensification, and the area north of Main Campus between Earl Street and Princess Street, an area anticipated in the City's Official Plan for University expansion in the form of buildings that are sympathetic to the low-rise character of the residential neighbourhoods. Both areas are considered appropriate locations for new student housing in a form consistent with the City's intentions (this is further described in Section 4.4).

Areas for preservation and modest change

Areas for preservation and modest change are areas of stability such as the City's residential neighbourhoods, as well as Heritage Conservation Districts, such as the Old Sydenham Heritage Area. If new development is located adjacent to or within these areas, special consideration will be made to ensure it transitions sensitively to fit with the existing context (a further discussion regarding heritage can be found in Section 5.2)

City Projects

In addition to plans and policies, a number of capital projects are planned for parts of the City within and near the University. These include streetscape enhancements along Sir John A. Macdonald Boulevard, and utility upgrades along Union Street. As the City moves forward with plans for these major projects, the University should seek opportunities to partner with City staff to ensure new streetscape and public realm improvements associated with the upgrades are consistent with the objectives of this Plan.



▲ Figure 4-1

City Initiatives

4.2 Movement Between Campuses and Parking Strategy

As more development occurs on West Campus, the University will require an expanded transportation system to carry the Queen's community between campuses.

Improving the ease and speed of getting between campuses will decrease the real and psychological separation between Main and West Campus, and make West Campus a more desirable place to be. With bus passes included in all student's tuition costs, Kingston Transit currently provides an important role in moving people between campuses, and to other parts of Kingston. But with more people moving between Main and West Campus, the University may also be required to supplement Kingston Transit with its own transportation services.

In addition to more development activity on West Campus, the likely relocation of parking spaces from Main to West Campus will increase demand for

frequent transportation. As it exists today, parking for Queen's staff, faculty, and visitors is located across both campuses as both surface and underground parking, with the majority of all-day parking for staff and faculty on West Campus. A University-operated parking shuttle assists movement from those parking on West Campus to Main Campus and vice versa. As illustrated in Section 5.3, many of the larger potential development sites on Main Campus are surface parking lots. As these sites are redeveloped, the University will need to develop a comprehensive strategy to manage parking demand, either with the replacement of parking spots or strategies to reduce parking demand. This strategy is consistent with sustainability objectives and makes good financial sense.

Campus Circulator

The University should explore the implementation of a campus circulator shuttle (an evolution of the existing parking shuttle service) that will be open to all Queen's students, staff and faculty. Planned as a continuous loop, bringing rapid transit service to Union Street, the circulator should provide regular service between campuses and stop at high traffic areas, such as surface parking lots on West Campus and the proposed West Campus Square (see page 158).

Figure 4-2 illustrates a proposed alignment of the circulator. The routing of the circulator must consider and supplement City transit routes to avoid any duplication. The route should also consider general principles regarding effective transit routes to ensure broad ridership. Movement to and from the Isabel Bader Centre for the Performing Arts should also be considered when determining a preferred route.

4.2.1
Recommendations

1. The University should revise its parking management strategy with the objective to identify clear priorities and supporting policies regarding parking supply across all land holdings. The strategy should consider campus sustainability objectives to reduce private vehicle trips as a transportation mode to and from campus. The strategy should examine:
   - Parking space supply caps or reduce parking ratios in relation to enrolment growth;
   - Costs for parking on both campuses considering demand versus supply;
   - Circulation patterns between West Campus parking and Main Campus.
2. The University should conduct a feasibility study for the campus circulator. Considerations should include preferred routing options as well as development yields on West Campus that will trigger the need for initiating the circulator service
3. The University will continue to consult with Kingston Transit in determining future routes that best serve the needs of Queen's students, faculty, and staff.
4. Transit stops and waiting areas should be considered priority areas for public realm improvements. The design of these spaces should include comfortable waiting areas, weather protection, and appropriate wayfinding signage.

▲ Figure 4-2

Movement Between Campuses and Parking Strategy

4.3 Cycling Network

A key component of the University's broader objective to create a sustainable campus is developing a safe, inviting, and convenient active transportation network. Cycling provides a quick and fun way to get to and around the University in a way that is good for both personal health and the environment.

A comprehensive cycling network plan ensures Queen's cyclists are supported by infrastructure and facilities that prioritizes cycling in an equal manner to the private vehicle and pedestrians.

Existing cycling routes are on-street bike lanes located on City streets, including Union and King Street. While these exist today, the University will encourage the City to bring forward design enhancements and provide ongoing maintenance of these routes to ensure safely demarcated, maintained continuous bike lanes.

Proposed routes are proposed on-road cycling routes that can be implemented as either dedicated lanes or "sharrows" (street markings that indicate cyclists may use a traffic lane).

Proposed cycling trails consist of off-street routes, that may be integrated with pedestrian trails. For the most part, these provide diagonal direct routes that dissect the Queen's Open Space Network. As shared spaces with pedestrians that also intersect with vehicular traffic, the design of these routes must integrate design and signage that facilitates safe movement.

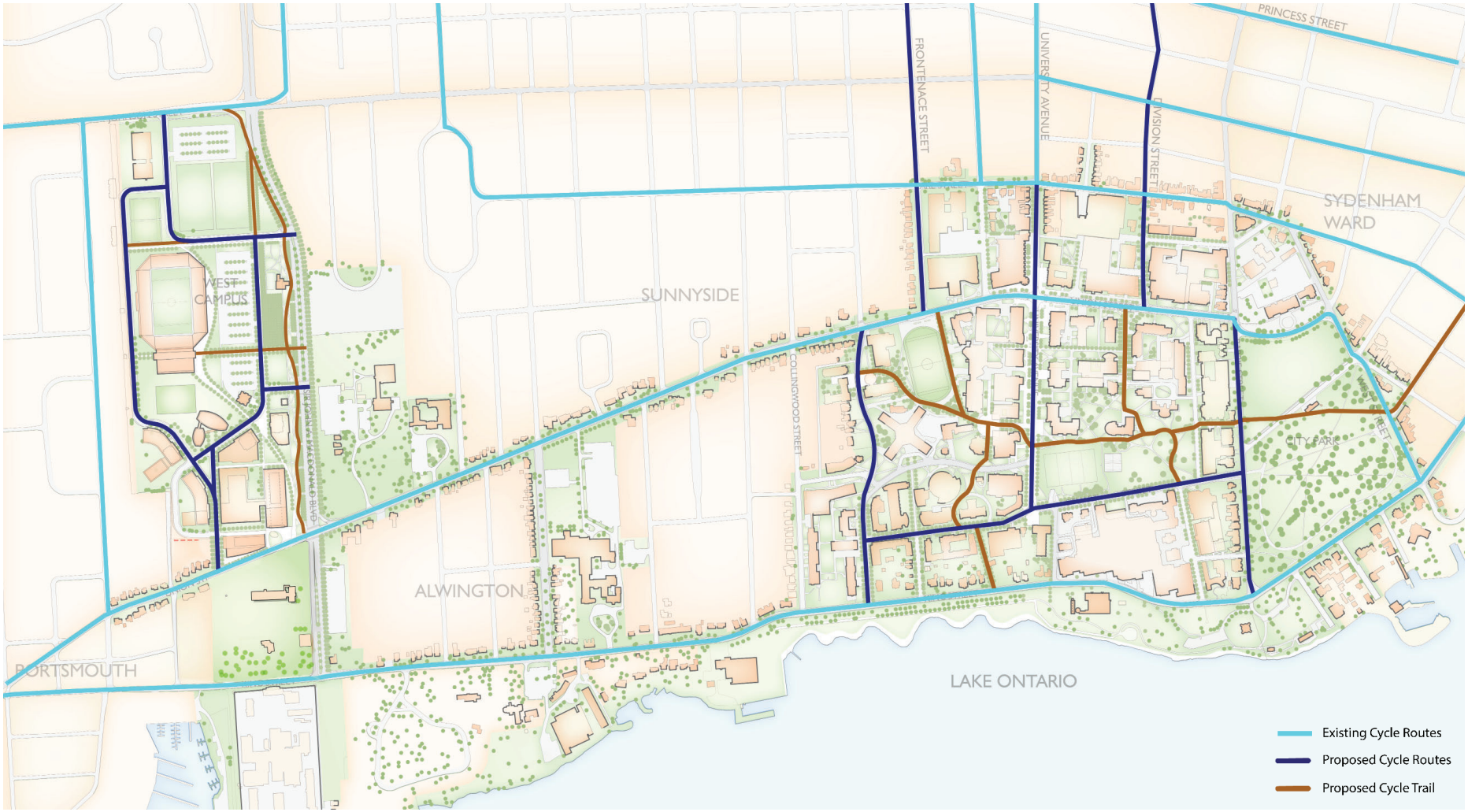
Recommendations regarding the overall cycling network and partnerships with the City of Kingston are listed to the right. Further University specific recommendations are found in Section 5.5.4 for Main Campus, and Section 6.5.4 for West Campus.

4.3.1 Recommendations

1. Advocate cycling lane improvements for Existing and Proposed Cycling Routes (as indicated on Figure 4-3) with the City of Kingston.

2. Consider design features to mitigate conflict between cyclists and pedestrians in the design of Walks and Pathways indicated as Proposed Cycling Trails on Figure 4-3.

3. Develop a cycling parking strategy to provide co-ordinated parking opportunities across both West and Main Campus. The strategy should locate cycling parking to areas that are weather protected, areas with good surveillance, and that do not obstruct pedestrian movement patterns.



▲ Figure 4-3
Cycling Network

4.4 Housing

Currently, a lack of appropriate housing in adjacent neighbourhoods has caused stress on nearby communities and wear and tear on much of the historic housing stock. The University supports the preservation and restoration of stable residential neighbourhoods and promotes housing that is of the appropriate form and in the appropriate location.

While the University guarantees residence housing to first-year students, capacity constraints and potential growth necessitate an expanded, multi-faceted approach to housing, working in partnership with the City and local developers. Appropriate types of housing for students, staff and faculty come in different forms, and these different types belong in different areas.

Figure 4-4 indicates different places on and near the campuses that are considered appropriate for different types of housing.

Campus Residences: These are multi-unit buildings owned and maintained by the University. They will be focused to areas with an existing concentration of residence buildings and University-owned lands bordering residential communities. On West Campus, opportunities for market housing to be constructed in conjunction with new residences should be considered as a revenue tool to leverage capital costs of new residences. The prioritization of new residences will be driven by strategic enrolment planning on a case-by-case basis.

Main Street Revitalization: This refers to store-top, mid-rise apartments located along Princess Street. Consistent with the Williamsville Main Street Study, this portion of Princess Street is considered an appropriate location for market or privately-partnered rental units. Campuses elsewhere have begun to recognize nearby Main Streets as appropriate environments for students. The physical and economic presence of a student population contributes to lively streets and shops, away from neighbourhoods consisting of single family homes.

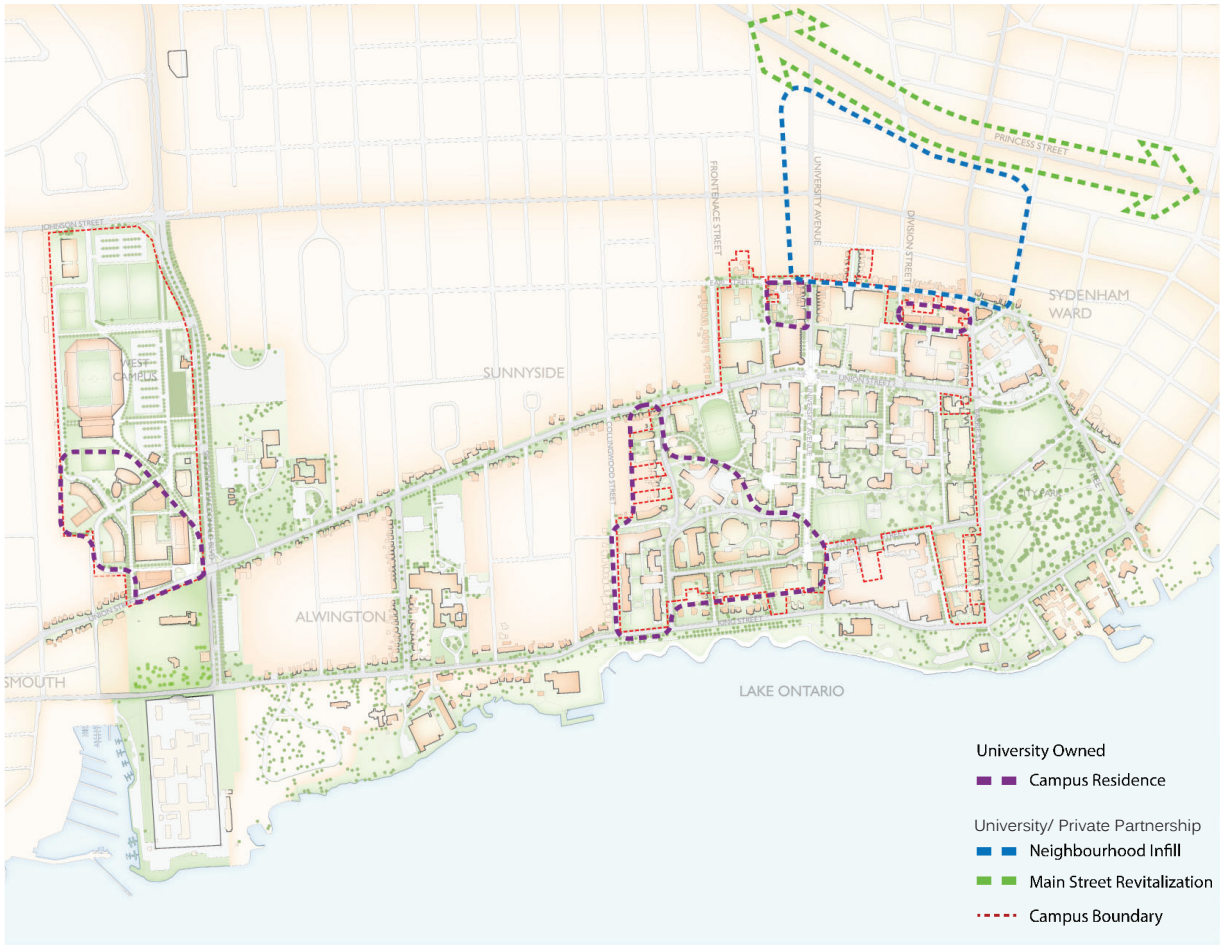
Neighbourhood Infill: Neighbourhood infill, in the form of low-rise buildings complementary to surrounding housing character, is appropriate in the areas between Main Campus and Princess Street. Housing here should be designed as mixed housing that is attractive to students and others. Complementary design will be realized through compatible heights, design detail or the possible retention of historically significant buildings. The University may explore opportunities with private partners to develop this type of housing.

4.4.1 Recommendations

1. Prepare a comprehensive housing strategy outlining policy regarding student residences and a plan to guide and support decision making and prioritization for both the short and long term provision for housing for students. The strategy should comply with the principles described in this subsection.

2. Continue to engage with the City of Kingston, Near-Campus Neighbourhoods Advisory Committee, and other stakeholders to realize opportunities for meeting mutual University and city-building goals.

3. Explore opportunities for non-residences housing on West Campus. These should be located near the southern edge of campus with access to City streets.



▲ Figure 4-4
Campus Housing

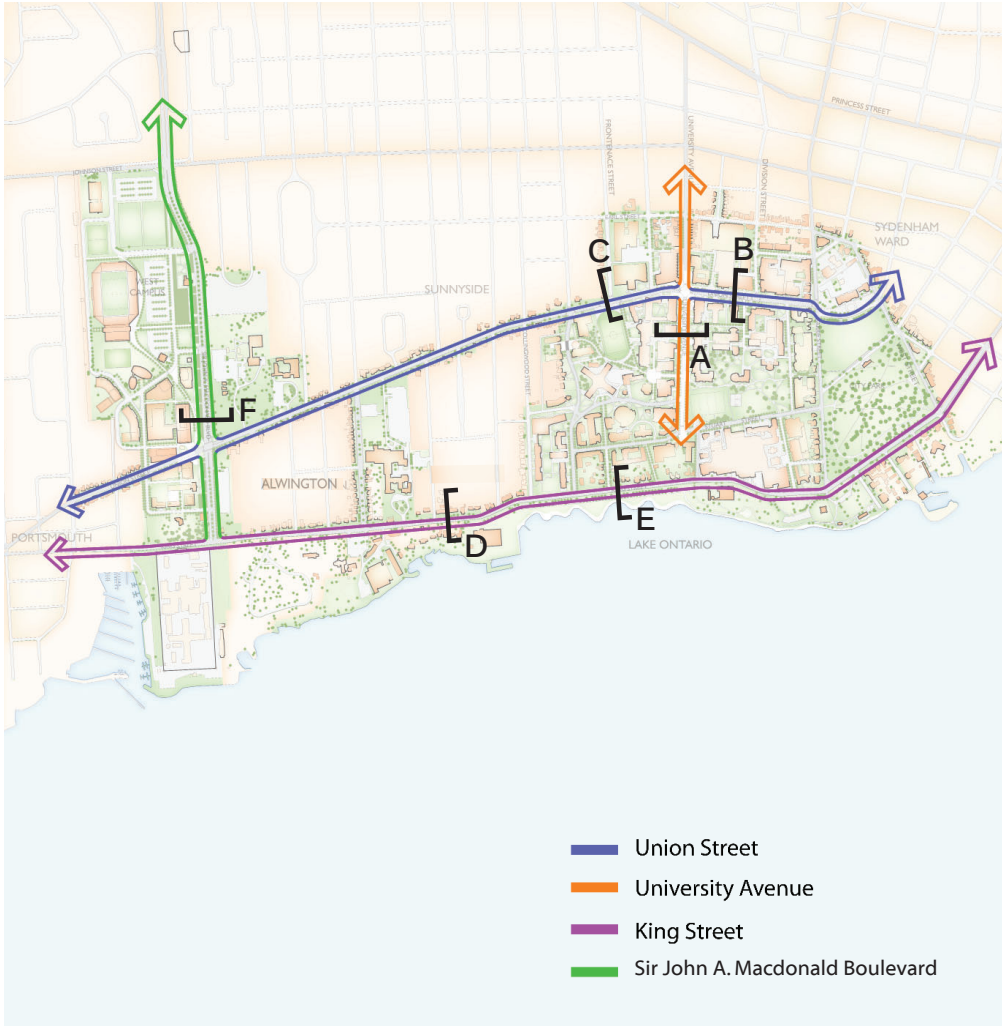
4.5 City Streets

In addition to carrying people and traffic, streets are places and destinations in themselves. They are the gateways to the campus and one of the key components of the campus experience.

Most streets on Queen's Campus are owned and maintained by the City of Kingston. To ensure the design of streets evolve in a manner that is consistent with the University's movement and placemaking objectives, Queen's must work closely with City staff to ensure future streetscape improvements satisfy common design objectives. This section contains cross-sections for the four main streets that border and run through both campuses, as well as descriptions as to how they ought to evolve.

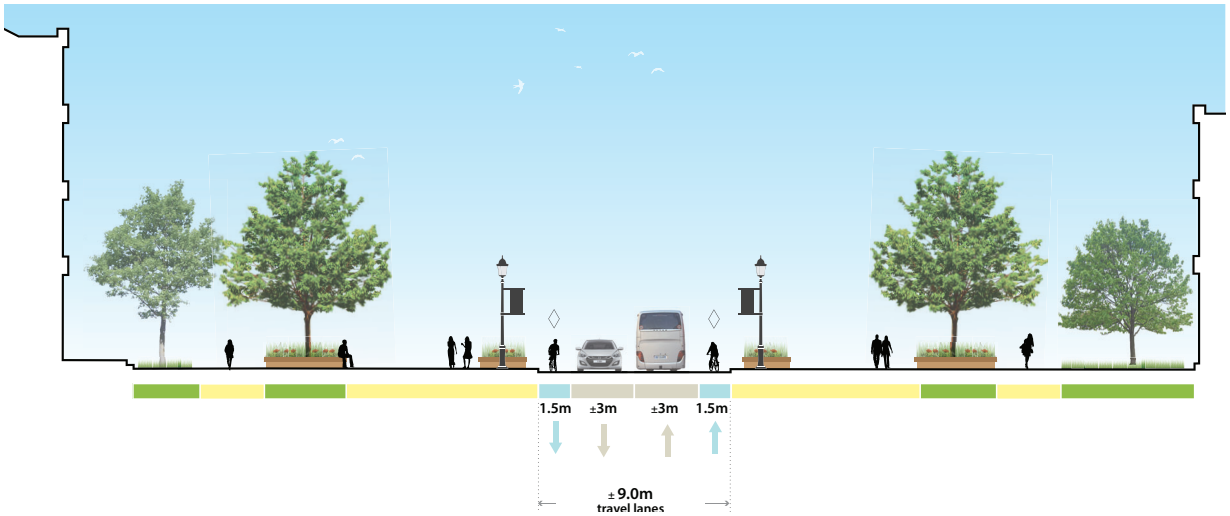
The strategies illustrated and described in this section reflect the objectives of Queen's. While they have been developed in consultation with City of Kingston staff, they have not been officially endorsed by the City.

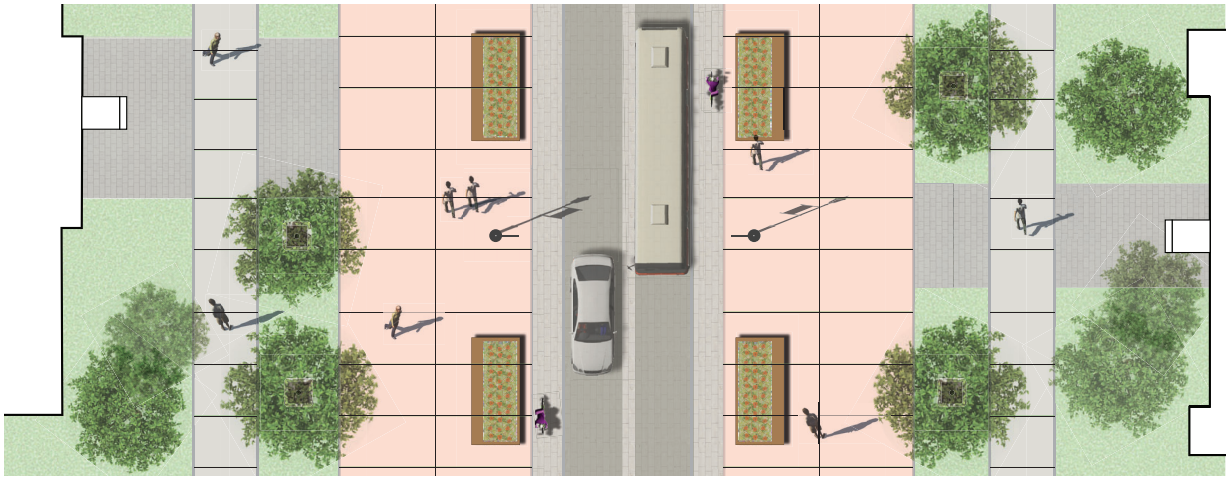
All required travel movement can be accommodated within the existing pavement area, meeting City standards for bicycle and vehicle travel lanes.



University Avenue

Cross-section A University Avenue at Ellis Hall / Ontario Hall



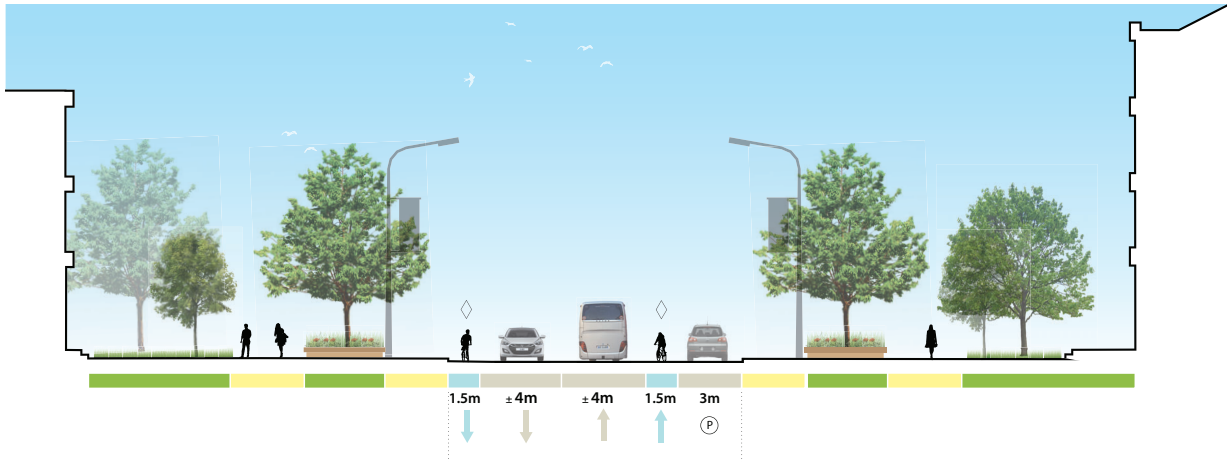


University Avenue will continue its role as Queen's ceremonial avenue, most closely associated with the image of Queen's. Building on recent improvements, small-scale design enhancements, described in more detail on page 92, seek to create an environment that reduces traffic speed, improves the public realm, and allows for safer crossings and cycling movement. Cycling lanes, at the minimum City standard of 1.5 metres, are illustrated, though wider lanes of 2.0 metres should also be explored. Design treatments such as planters and new public seating will be located on either side of sidewalks to buffer pedestrians from traffic, and create places to rest, meet with friends, and read. The introduction of traffic tables at key crossings will prioritize the pedestrian.

Figure 4-5
Proposed University Avenue Design

Union Street

Cross-section B Union Street between University Avenue and Division Street



As the primary connector of West and Main Campus, rights of way for all modes of transportation on Union Street should be accommodated. Design should consider ways to minimize disruption to adjacent neighbourhoods. The proposed cross-section provides for continuous, separated cycling lanes along the length of the entire street. To implement this cross-section between University Avenue and Division Street, one lane of on-street parking would need to be removed.

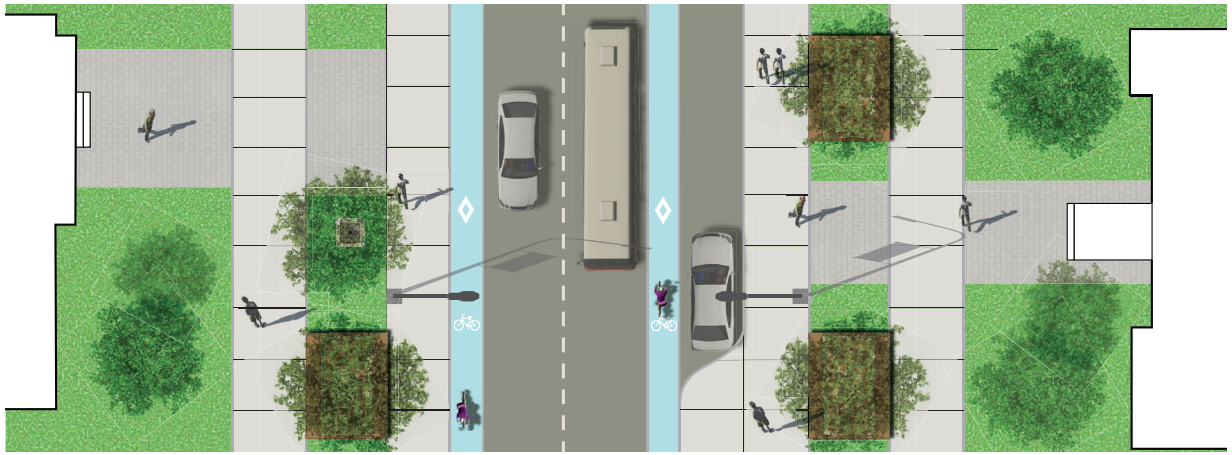
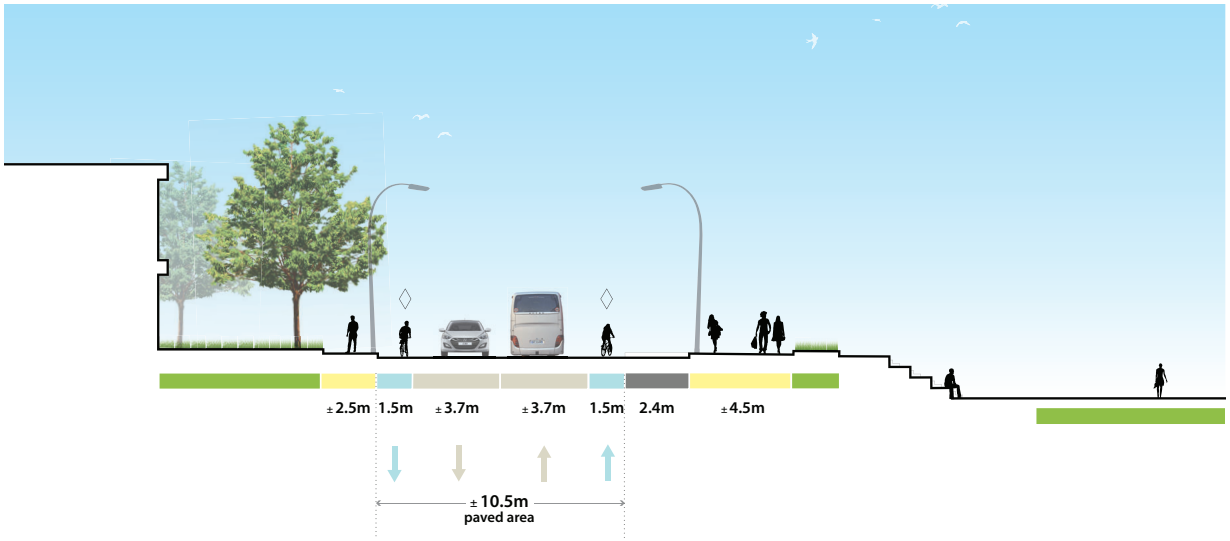
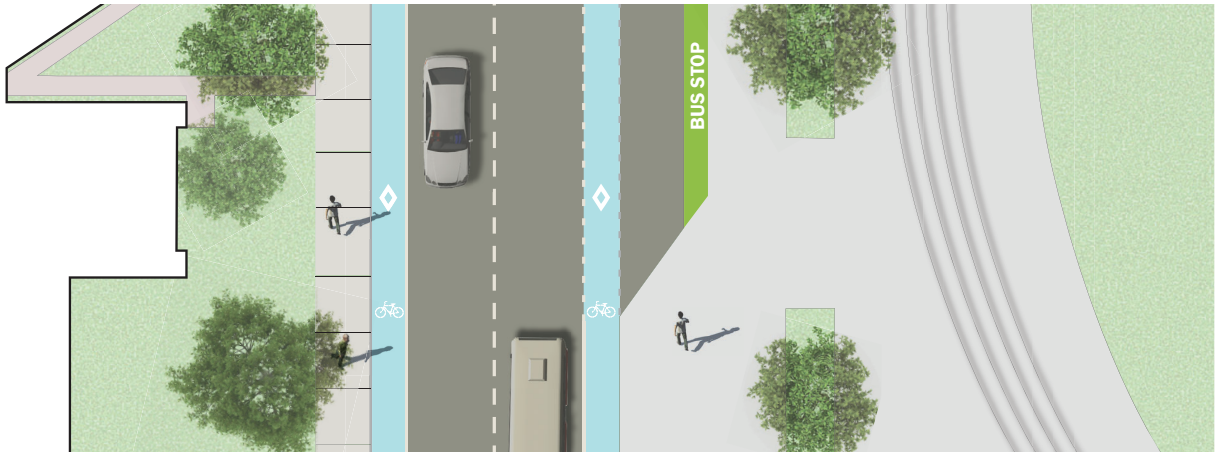


Figure 4-6
Proposed Union Street Design (between University Avenue and Division Street)

Cross-section C Union Street between Albert and University Avenue



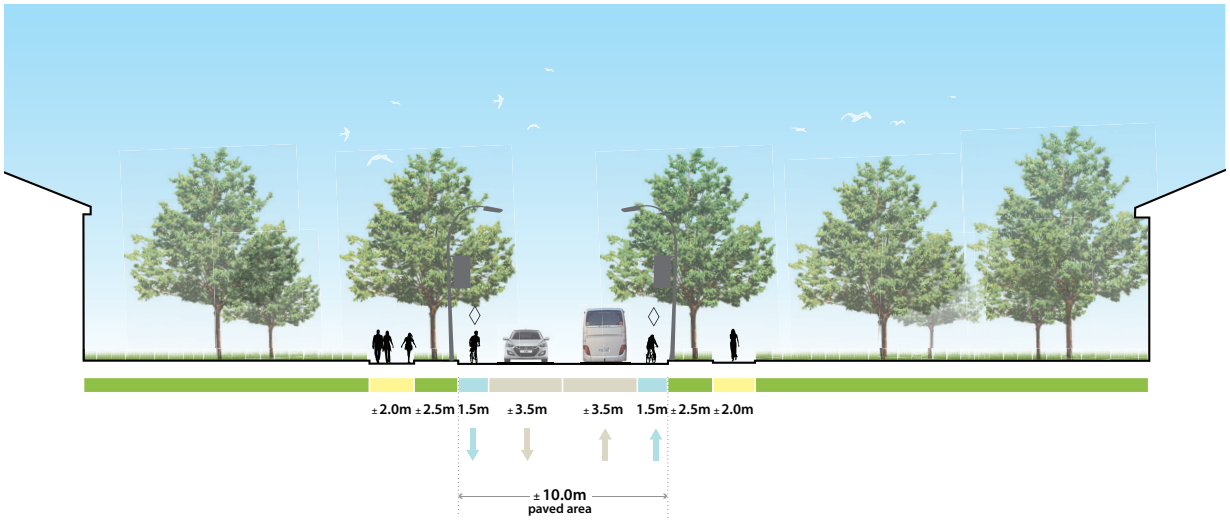


The cross-section to the left provides design detail for portions of Union Street where on-street parking doesn't exist, and illustrates the design treatment for cycling lanes where bus bays might interfere with cycling movement.

Figure 4-7
Proposed Union Street Design (between Albert Street and University Avenue)

King Street

Cross-section D King Street between Sir John A. Macdonald Boulevard and Beverley Street

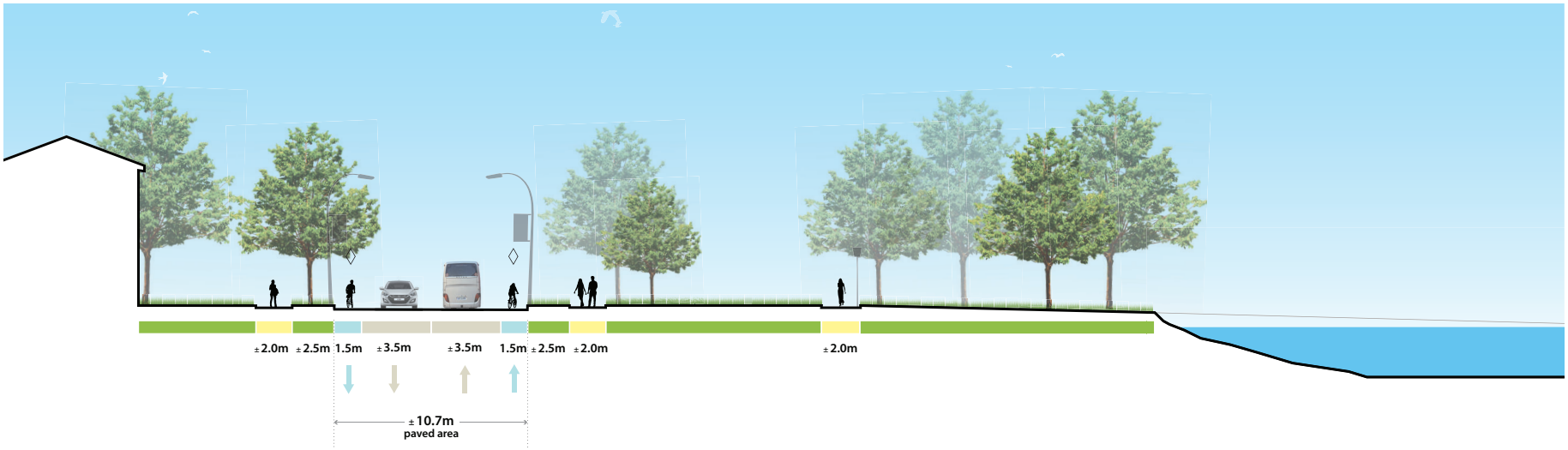


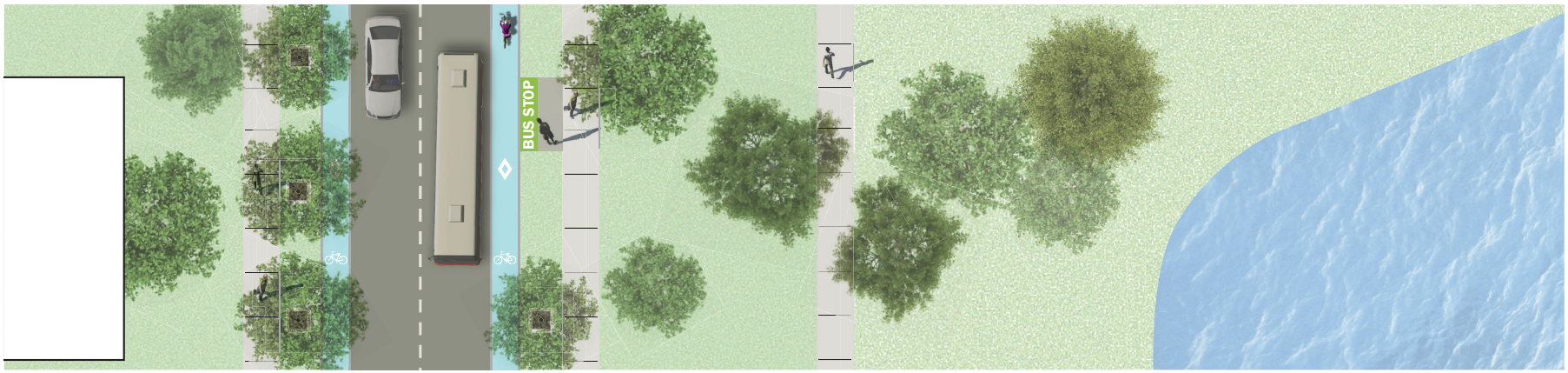
King Street connects some of Kingston's most historic places as well as connecting Main Campus to the Isabel Bader Centre for the Performing Arts. To complement its setting as a cultural landscape, it will be designed with a higher level of design detail and amenity than most streets. To increase safety for cyclists and pedestrians, the proposed cross-section integrates traffic lanes with continuous cycling lanes on King Street between Sir John A. Macdonald Boulevard and Beverly Street. On King Street between Beverly Street and King Street, a multi-use trail through City Park may be incorporated into the cross-section. For both cross-sections, sidewalks are proposed on the south side of the road to provide safe and comfortable pedestrian routes.

◀ Figure 4-8
Proposed King Street Design between Sir John A. Macdonald Boulevard and Beverley Street

▶ Figure 4-9
Proposed King Street Design between Beverley Street and Barrie Street

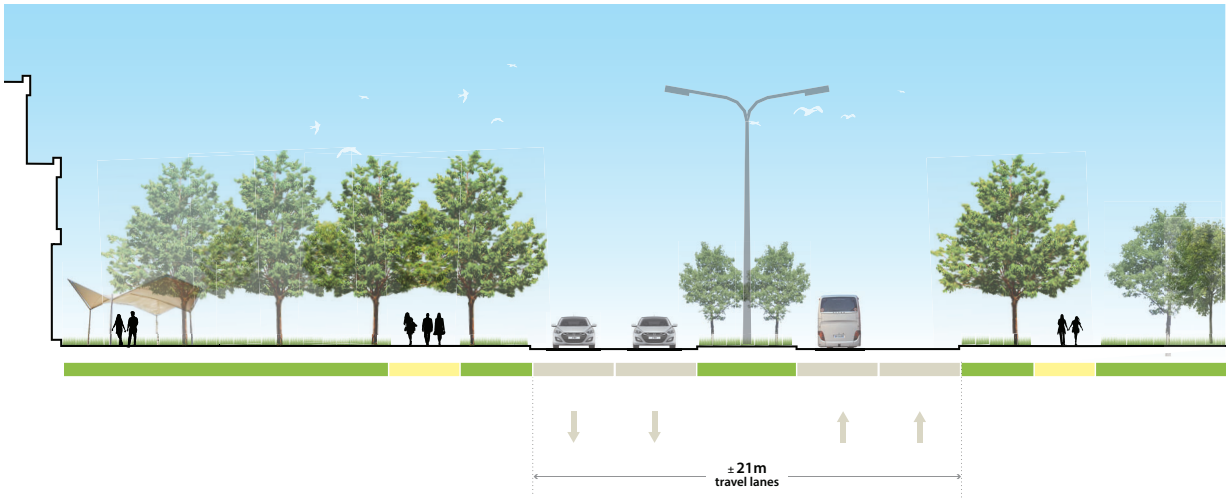
Cross-section E King Street between Beverley Street and Barrie Street





Sir John A. Macdonald Boulevard

Cross-section F Sir John A. Macdonald Boulevard



Building on the City's plans for streetscape improvements north of Johnson Street, Sir John A. Macdonald Boulevard is envisioned as a grand, green street extending from Highway 401 to the waterfront. Its design will reflect its role as a major gateway to Queen's, featuring new, lush landscaping and design details. While travel widths will remain the same, the proposed cross-section will enhance the public realm with new street trees and wider sidewalks on both side of the street.

Figure 4-10
Proposed Sir John A. Macdonald Boulevard design

4.5.1
Recommendations

1. Design improvements to City streets should consider their specific role, function and character and contribute to University placemaking objectives and the open space network.

2. The cross-sections contained in this chapter should be considered the University's preferred design for any future reconstruction of City streets. If the City's preferred rights-of-way do not comply, they should demonstrate how they achieve the form, function and character as described in this document.

3. Prioritize pedestrian, bicycle and transit activity in improvements to all campus streets.

Union Street
Collingwood Street

Main Campus Master Plan

5

Main Campus' historic buildings, open spaces, and gathering spots are fundamental to the image of Queen's and highly valued by students, staff, faculty, and alumni alike. Even though the campus is much loved, changes on Main Campus will be necessary to ensure the University continues to provide the appropriate facilities and social spaces for a contemporary and sustainable campus. Change will occur mostly in the form of renewal to existing facilities, with the objectives of bringing older buildings into contemporary conditions, all while protecting and enhancing the existing image, experience and historic fabric of the campus. Modest amounts of new development will also occur in the Campus' few remaining underutilized spaces. Where this occurs, it is important that new buildings respond to the existing context through sensitive and respectful design.

This chapter provides direction regarding all the change that will occur on Main Campus. It is divided into the different systems that make up the overall physical structure, including land use patterns, heritage, development sites, and movement.

Figure 5-1
Main Campus Perspective

University Avenue
Union Street
Barrie Street

5.1 Land Use and Social Infrastructure

Historically, the pattern of uses and activities on a University campus reflect the administrative and academic organization of the institution. Queen's was consistent with this approach with faculties that were relatively closed communities - each occupying their own quadrangle or buildings. Remnants of this organization remain today. However, relationships and communities at universities today are much more dynamic, diverse and multi-disciplinary. Combining uses and sharing facilities on campus reflects this move towards multi-disciplinary learning and the integration of Indigenous knowledge into curricula, and also contributes to a mixed-use campus where different functions and services are integrated and in close proximity to one another.

Social Infrastructure

Rather than provide a prescriptive land use structure on Main Campus, this section provides recommendations to locate uses and facilities on campus that support an interdisciplinary learning environment. The objective is to identify the pattern of "social infrastructure" , the key places of gathering and learning at Queen's. This approach is similar to the Library and Archives Master Plan's recommendation for new library communities, Library Information Network at Queen's (LINQ). Evenly distributed across campus, LINQs will be spaces for learning, research, and socializing consisting of study commons with access to library support. While technological advancement have made it possible to access information and resources everywhere, there is a desire and necessity to create a number of environments that foster the environment of learning and social interaction, to form relationships that spawn innovation.

In the same spirit as the LINQ, this section addresses two priorities. The first is to identify those places on campus that are currently lacking social infrastructure, and recommend

▲ Figure 5-2

Main Campus Social Infrastructure

such spaces be located here. The second is to identify the places where these concentrations exist and align them with broader public realm improvements, providing formal spaces for social life to occur, this includes enhancing the visibility of Indigenous communities at Queen's and promoting inclusive learning spaces on campus. This approach to "place-making" will provide a framework of communal places and landscapes which can be occupied by a number of groups as the University evolves.

Places with Deficit of Social Infrastructure

Figure 5-2 identifies the general location of social infrastructure, referred to as "student life" spaces, as well as other campus uses such as academic, administration offices, and residences. For the most part, these spaces (in yellow) are well distributed across campus, with a primary focus on the area north of Union Street from the Queen's Centre to Stauffer Library. However, there are a number of areas on campus that lack social infrastructure. Those areas devoid of yellow dots (mostly the areas around Queen's Quad and the northwest corner of campus near Albert and Union) are priority areas in need of more social infrastructure.

Aligning Social Infrastructure with Public Realm Improvements

Areas with a concentration of social infrastructure (the clusters of yellow), such as the Queen's Centre and Student Residences should be considered places for public realm enhancements such as landscape improvements or the installation of street furniture, with a focus on extending these internal places to the public realm.

Residences

Residences on Main Campus are generally concentrated in its southwest corner. Development sites in this vicinity may continue to be considered as new residence locations, however, due to the minimal development opportunities without constraints on Main Campus, other areas for residences should be explored. A suitable and recommended area is land north of Union where the Social Life uses that exist can support such uses. The University will also explore opportunities for student housing off-campus, in compliance with the directions provided in Section 4.4 of this plan.

Academic Uses

Academic Uses will continue to be distributed across campus, however, West Campus should increasingly be considered for new or relocated faculties and departments.

Recommendations

1. Areas illustrated in this chapter's diagrams as lacking Student Life Spaces should be considered priority areas for additional social infrastructure. Social infrastructure includes all space and informal environments that facilitate student and faculty interaction, sustaining or enhancing programming that supports a more holistic Queen's out-of-classroom learning experience. These include group study spaces, Indigenous teaching and ceremony spaces, cafés, LINQ locations, student government offices, club spaces, and student-run services.

2. Buildings and facilities around the Queen's Quadrangle should be considered priority areas for social infrastructure. This includes the School of Medicine, Biosciences Complex, and Theological Hall. Additionally, temporary opportunities for social infrastructure within Queen's Quadrangle, such as food trucks, convenience kiosks, and student organization tables should be considered in this area.

3. The emphasis on distributing Student Life Spaces across campus should not detract from investments in improving existing Student Life Spaces in need of repair.

4. In order to preserve the nature of the essential community building features of student life on campus, any relocation or displacement of current student life space should respect the original purpose and character of the space. New space should be at least equal in quality and quantity to the original space and be designed to be flexible and adaptive for changing uses.

5. Areas with a high concentration of social infrastructure should be considered priority areas for public realm improvements that incorporate infrastructure for gathering and socializing, such as outdoor patios, public seating (including Indigenous seating circles), and attractive landscaping.

6. The University will work with University food services to identify locations for small-format markets or cafés across campus. Areas lacking Student Life Spaces should be considered priority areas for locating this amenity.

7. The Campus Master Plan does not prescribe detailed use patterns. Notwithstanding, certain uses that are space-intensive are not considered appropriate for development sites on Main Campus including:
   - new administrative and back-office uses
   - space-intensive, large-scale industrial spaces
   - new or expanded athletic facilities

5.2 Heritage

The historic nature of Main Campus is one of its most defining qualities. Its limestone buildings and picturesque landscapes have become synonymous with the institution's image and experience. The historic neighbourhoods that Main Campus sits within provide a distinct setting, rich in Canadian History.

Over the past decades, Queen's has been committed to preserving its historic assets. The Main Campus vision continues this commitment, recognizing the important role historic buildings and landscapes play in creating a sense of place and fostering a spirit of a collective history.

Patterns of Queen's Built Heritage

There are two significant patterns that characterize Queen's historic character. First, there is an evolution towards a general use of stone for institutional buildings and brick for residential buildings, which is indicative of Upper Canada more generally and "Limestone City" in particular. The earliest 19th Century developments preceded the easy availability of brick, so substantial estate residences such as Summerhill House, as well as the major institutional buildings, were constructed of stone. However, once manufactured brick became easily available in the second half of the 19th Century, there was a general acceptance of stone for institutional construction - not only University buildings, but also the Court House to the east and the prisons and psychiatric hospital to the west, reserving brick for residential buildings.

The other pattern that emerges is the contrasting siting of individual stone buildings as relatively independent pavilions within the landscape, and the construction of brick residential buildings as ordered components of more uniform residential streetscapes. The brick buildings are individually smaller, but they create relatively continuous street facades with shared setbacks and similar proportions.

These patterns become significant when examining the edge conditions between Queen's and surrounding Kingston neighbourhoods. Generally, the academic campus is associated with larger-scale stone buildings that are relatively independent in their siting. They may have several important facades, and create internal courtyards as well as street frontages.

Residential areas, by contrast, have a strong focus on the street as the organizing element. They have a distinction between more public street frontages, minimal side yards, and private back yards. This typology is relatively consistent across Kingston's various periods of residential development.

The Goodes Hall addition responds to the historic school house's scale in a contemporary manner.

▲ Figure 5-3

Main Campus Heritage

Determining Heritage Value

The approach to determining which buildings are of historic significance takes into account a broader notion than the historic value of just individual buildings. Each building within the campus has been considered within a context of overall relationships between various physical, function and cultural identities. The following observations and principles have been utilized to assign heritage value to individual buildings as they contribute to the overall historic landscape:

- It is important to recognize both the heritage value of individual buildings and the heritage value of the context within which they exist. For example, while the 19th century residential buildings on Barrie Street may not individually be of historic value, their contribution to the historic character of City Park renders them valuable to the Old Sydenham Ward's historic landscape.
- Stone-clad buildings define the primary character of the main Queen's campus, and constitute the most important character-defining element of this campus. Besides their material and style - various interpretations of what can generally be called collegiate Gothic - they are also notable for their position as pavilions within a relatively continuous landscape.
- Brick-clad building define the primary character of the surrounding residential neighbourhoods. These smaller-scaled residential buildings exist not just as independent structures but as contributing elements to two-sided residential landscapes that exhibit a relatively uniform pattern of setbacks and proximity .
- There remains to be defined a transitional architecture that defines the boundary conditions between institutional and residential districts. The scale, material, texture and street relationship of the two identities - institutional and residential - are so different that they do not always co-exist comfortably.

Historically significant buildings and areas where housing form must be considered

Figure 5-3 categorizes Main Campus' buildings into three categories. The first category, "Historic," illustrates buildings with either an individual historic significance, or that strongly contribute to a historic landscape, such as the houses on Barrie Street opposite City Park. These buildings should be retained, but under appropriate circumstances, may be incorporated into new development.

The second category, "Redevelopment Permitted," illustrates older buildings that may be either retained or demolished, but where replacement development must respect the existing housing form of the street. Development here should contribute to low-rise, continuous street facades with shared setbacks and character, which importantly define Queen's historic adjacent neighbourhoods.

The final category is all other buildings that are not considered historically significant (based on the rationale described in this section).

Recommendations

Marrying Historical Value with Renewal

The indication of a building as historically significant does not preclude renewal. As an historic campus with many historically significant buildings, there will be a need to renovate interiors to bring buildings into a contemporary standard, or to utilize developable space between or behind buildings. Contemporary heritage preservation principles recognize that sensitive and carefully considered architecture additions or renovations can actually prolong an historically significant building's life by providing it with a current use (while simultaneously addressing deferred maintenance issues). Queen's has already utilized this approach to preservation through a number of new developments, including Goodes Hall and the School of Medicine Building. A fuller discussion of design principles to consider when altering or providing an addition to historic buildings can be found in the Building Design Guidelines in Part 2 of this document.

1. The heritage value of individual buildings should consider both the individual historic significance of the structure in addition to how the building (or buildings) contributes to Queen's and Kingston's historic landscape.

2. Buildings coloured in blue on Figure 5-3 are considered historically significant and will be retained. Internal alteration of these buildings is permitted, however, a facility-specific historic assessment will be required in advance.

3. Buildings coloured in blue on Figure 5-3, specifically smaller buildings, such as those on Albert Street and University Avenue, are permitted for incorporation into new development, provided their prominence to the street is not compromised.

4. Where an historically significant building is incorporated into new development, the massing and design of the building should give prominence to the historic structure. While any addition should complement the historic structure, new components of these buildings should not imitate the historic style, and should be contemporary in design.

5. Buildings coloured in purple on Figure 5-3 are permitted for new development, however new development should retain the existing character and scale of the street. Redevelopment of these buildings must demonstrate a sensitive transition to adjacent neighbourhoods.

5.3 Renewal and Development Sites

With few vacant parcels remaining on Main Campus, there are limited major development opportunities.

As a result, the focus for change on Main Campus in the near term will be the renewal of existing facilities to better align existing spaces to meet the needs of current and future users. Figure 5-4 identifies sites on campus appropriate for change either in the form of new construction or redevelopment sites. Discussed in fuller detail in Chapter 2, these include:

- Vacant or undeveloped sites;
- Surface parking lots;
- Existing sites facing a backlog of deferred maintenance that are not historically significant;
- Sites that are underutilized (in terms of use or intensity) that are not historically significant.

Together, these sites indicate there are a number of locations on campus that provide opportunity for renewed or new facilities, however only those on vacant or undeveloped sites and surface parking lots provide relatively cost effective and more immediate opportunities.

Development Sites

A Albert Street Site
B Tindall Field Site
C Queen's Crescent Site
D Rideau Building Site
E Alfred Street Site
F Jeffery Hall Site
G LaSalle Building Site
H PEC Building Site
I Fleming and Clark Site
J Kathleen Ryan Hall Building Site
K Clergy Street North Building
L Clergy Street South Building Site
M Louise D Acton Site
N Cataraqui Building Site
O Harrison-Lecain Hall Site
P Aberdeen Street Site

Figure 5-4
Main Campus Renewal and Development

Development Site
Key Building Frontage
Demolition - Due to Poor Facility Condition
Demolition - Under Utilization
Historic
Courtyard Space Required
Proposed Service / Access Route
Proposed Service / Access Zone
SYDENHAM WARD
UNION STREET
BARRIE STREET
WEST STREET
CITY PARK
KING STREET
LAKE ONTARIO
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P

The near-term plan, contained in Chapter 8, identifies a potential development prioritization plan.

With some development sites in high profile locations, and because many redevelopment sites will be incorporated with historic buildings, there are a number of considerations and - in some case - conditions that are required as part of any development project proposed for these sites. Figure 5-4 overlays a number of symbols indicating these considerations. These are:

- The identification of **key building frontages** which buildings should be built to, in order to reinforce the spatial continuation and hierarchy of campus open spaces. Primary entrances should also be oriented toward the key frontages and should feature a high degree of glazing (the incorporation of windows or other design features that provide interaction between the public realm and building interiors) located at the ground floor level.
- **Historic buildings** (or portions of a building) to be protected, either through incorporation into new development or facility renewal. In some cases, redevelopment may be permitted for underutilized areas to the rear of historic buildings. In this instance, the historic building is required to be prominently incorporated into the building's design. The design should seek to include as much of the buildings exterior, and should avoid façadism (the retention of only the historic buildings front façade). For a broader discussion about Heritage on Main Campus, see Section 5.2 of this chapter.
- **Required courtyard spaces** to be included in a buildings design. These have been indicated to contribute to Main Campus' traditional campus open space network and provide open space relief in larger development sites.
- Servicing access routes and building service zones, to ensure the functionality of new development. These systems are described further in Section 5.5.5 of this chapter.

For a fuller discussion of these considerations, see the Precinct Plans in Part 2 of this document, which consolidate the opportunities and requirements for campus evolution for each renewal and development site on a place-by-place basis.

Recommendations

1. The development sites indicated in Figure 5-4 should guide the selection of sites for new development on Main Campus. The considerations provided in this section should be applied to the placement and design of all new development.

2. The most cost effective development sites exist on what is, currently, surface parking lots. Displaced parking will be accommodated on West Campus, in conjunction with the parking strategy detailed in Section 4.2.

5.4 Open Space Network

Queen's open space network – consisting of the formal and informal spaces between buildings – is one of the key components of what the Queen's community and alumni value about the campus. These places support the image of Queen's and are also an important place to gather and form community.

This section provides direction for the evolution of Main Campus' open space structure, which consists of existing places, as well as a number of proposed landscaped projects that are meant to enrich the existing network. These initiatives will be realized in concert with new development and infrastructure renewal projects.

Main Campus' open space network can be divided into four landscape types that reflect the particular role, function and hierarchy of these places within the larger open space network. These four landscape types include picturesque landscapes; formal linear landscapes; plazas, courtyards and small greens; and gateways.

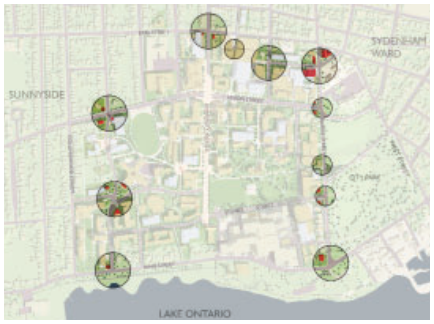
Figure 5-5
Main Campus Open Space Network

Picturesque Landscapes

Formal Linear Landscapes

New Plazas, Courtyards and Small Greens

Gateways



Recommendations

1. A Landscape Master Plan for Main Campus should be developed as a comprehensive guide to landscape investment based on the landscape projects identified in this document. Landscape projects will be implemented according to University objectives and funding opportunities.

2. New landscape projects will reinforce the established character, image and the spatial structure of the campus. Individual landscape projects should be planned and designed to contribute to the sense of a whole campus as well as meeting particular site and program requirements.

3. New plantings should consist of a variety of native or non-invasive species to promote biodiversity. Planting selections should consider species that provide visual variety at different times of year.

4. Leverage traditional knowledge with respect to integrating traditional Indigenous plants across the campus gardens.

5. Plantings should generally be arranged to frame pathways and provide visual interest to those walking through components of the open space network.

6. To animate components of the open space network and to promote natural surveillance, the location and design of building entrances, active uses at ground level and visual connection between interior and exterior of buildings should promote appropriate movement patterns through, and the animation of, the open space network.

Native plantings, such as those in the Native Garden located in front of the Biosciences Complex, promote biodiversity and provide a place-specific characteristic to the University's Open spaces.

This corridor leading to the entrance of the School of Medicine is a Formal Linear Landscape that demonstrates how the design of open spaces contribute to a legible and enjoyable movement network.

7. The design of landscapes should take into account the kind and extent of the maintenance they will receive. Some landscapes may justify intense maintenance by virtue of their special purpose or value, but these should be the exception. In general, landscape design should underpin Queen's life-cycle landscape maintenance program and be both economical and sustainable to implement and maintain.

8. Opportunities to incorporate plantings into the design of buildings, such as green roofs or living walls, should be encouraged in all new development.

9. A design standard should be developed for Queen's open spaces requiring hard surfaces, such as walks or plazas. These will guide the design of new open space projects or improvements to existing spaces.

10. Consider naming opportunities, or other methods to acknowledge donors, as a way to raise funds for landscape projects.

11. Consider the creation of open spaces that reflect, celebrate, and honour the culture and the territory of the Anishinaabe and Haudenosaunee Peoples.

12. The design and retrofit of all landscapes, existing and proposed, should comply with Queen's Accessibility Guidelines.

EARL STREET
SYDENHAM WARD
SUNNYSIDE
UNION STREET
UNIVERSITY AVENUE
BARRIE STREET
WEST STREET
COLLINGWOOD STREET
CITY PARK
B
A
C
D
STUART STREET
KING STREET
LAKE ONTARIO

5.4.1 Picturesque Landscapes

Picturesque landscapes are expansive open spaces, designed to convey an idyllic natural setting. They are typically characterized by lush, informally placed plantings interspersed with meandering pathways that form a variety of landscape geometries.

These landscapes are the setting for some of the first buildings at Queen's. These buildings were designed in relationship to their picturesque setting, and in turn they provide panoramic views of their setting.

Picturesque landscape are a quintessential component of the traditional campus and are some of Queen's most recognizable open spaces such as the fields around Summerhill that include Queen's Quadrangle and Nixon Field (referred to in this document simply as Queen's Quadrangle). They are places to gather and celebrate, take a stroll through, and admire. Given their importance and visibility, picturesque landscapes deserve enhanced maintenance, care and ongoing improvements. These landscapes will continue to be preserved, with certain modifications proposed to enhance the functionality and overall image of these iconic places.

As illustrated in Figure 5-6 the Picturesque Landscapes on Main Campus consist of the following:

Projects for Consideration:

A Queen's Quadrangle Enhancements
B Tindall Woods
C Victoria Green
D Chown Hall Green

Cornell University

◀ Figure 5-6
Picturesque Landscapes

Recommendations

1. The traditional character of Main Campus' picturesque landscapes should be protected, maintained and enhanced through continued investment and maintenance.

2. Landscape plans should be developed for each picturesque landscape, including provisions for pathway re-treating or re-alignments, new plantings, and guidelines for adjacent buildings.

3. In order to provide an animated public realm, active uses, such as playing fields or tracks, should be encouraged in picturesque landscapes where appropriate. The placement and design of these facilities will consider the context of its setting.

Queen's Quadrangle Enhancements

The Queen's Quadrangle is one of the most memorable and treasured open spaces on campus, providing the backdrop to some of the University's most iconic buildings and landmarks. It is also a gathering space for a variety of purposes including large scale events, recreational activities, as well as day-to-day moments such as relaxing between classes, studying, and a meeting place.

As with most picturesque settings, the Queen's Quadrangle has evolved over many years. A number of further enhancements are recommended to improve the pedestrian experience and image of the space, as well as animate it all times of day.

By some re-aligning of existing service lanes, the Queen's Quadrangle will extend to incorporate Agnes Benidickson Field. Existing walks will be modified to better signal hierarchy, legibility, and co-ordination. As well, additional landscaping will be incorporated to further enrich this iconic setting.

Recommendations

1. To better incorporate Agnes Benidickson Field as part of Queen's Quadrangle, remove the current servicing road that connects Summerhill House to Kingston and Theological Halls.

2. Re-pave and widen Professor's Walk to reinforce this route as the predominant east-west connection through the Queen's Quadrangle.

3. All other walking paths should be narrower than Professor's walk and be of a consistent paving treatment.

4. To improve pedestrian safety and buffer Queen's Quadrangle from vehicular traffic, work with the City to design and install a sidewalk and street trees along the north side of Stuart Street.

5. Re-surface the existing tennis courts to improve usability and appearance.

6. Improve stewardship of the Arboretum through enhanced maintenance and new plantings.

7. Consistent with the recommendations in Section 5.1 to locate Student Life uses around the Queen's Quadrangle, consider temporary uses within the space including amenities such as refreshment kiosks, food trucks, seating areas and public art.

8. Integrate permanent infrastructure such as power outlets to support small and large gatherings.

▶ Figure 5-7
Queen's Quadrangle Enhancements Perspective

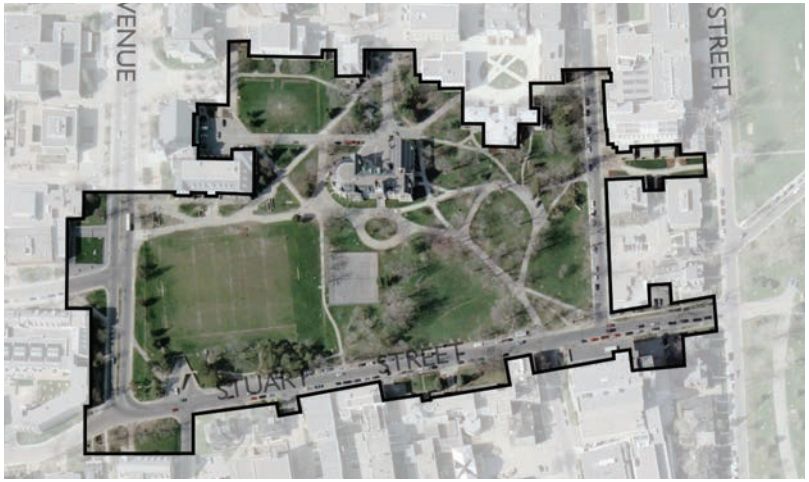


Figure 5-8
Queen's Quadrangle Existing Condition

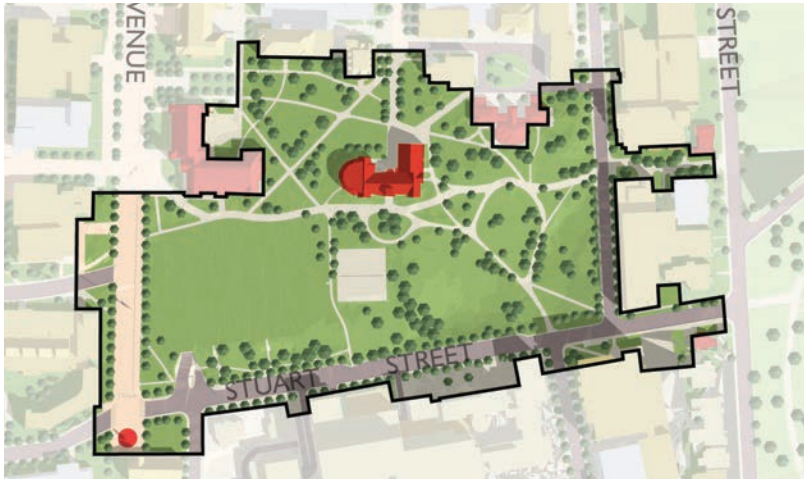


Figure 5-9
Proposed Queen's Quadrangle

Tindall Woods

Tindall Woods is the enhanced re-imagining of the open space surrounding and including Tindall Field. Currently defined by diagonal linear pathways, re-alignments of pathways and design enhancements will improve the image of the space and extend Queen's picturesque landscapes to edges of campus.

As one of the prominent views to those entering the University along Union Street, this open space has the potential to be a defining feature of Queen's, as well as an attractive setting to travel through.

Recommendations

1. As new development occurs at the surface parking lot at the corner of Union Street and Albert Street, install a new path connecting from the southern tip of Tindall Field to Stuart Street. Consider this as an opportunity to re-align existing pathways as a more meandering design.

2. Plant additional trees and shrubs, and other landscaping to beautify the space. New trees should frame the pathways and be located in key view termini.

3. Consider public art in visual terminus points, such as the south end of the pathway along the eastern edge of Tindall Field.

Figure 5-10
Tindall Woods Perspective

Figure 5-11
Tindall Woods Existing Condition

Figure 5-12
Proposed Tindall Woods

Victoria Green

Victoria Green is the open space surrounding Victoria Hall. Defined by its centerpiece's dynamic modern architecture and deep setbacks from the road, this landscape will be enhanced through new plantings that provide visual variety, keeping with the area's and University's tradition, and new pathways to facilitate movement and create visual variety.

Recommendations

1. To beautify the setting, install new plantings throughout the space.

2. Extend the pedestrian path leading from the Victoria Hall Albert Street entrance to the new development and align with a new pathway on the west side of Albert Street.

3. Consider re-surfacing the pedestrian island located at the confluence of Albert Street, Bader Lane, and Queen's Crescent with soil to allow for plantings, or with planters. Co-ordinate new plantings and grasses that respond to the landscaping on either sides of Albert Street.

Figure 5-13
Victoria Green Perspective

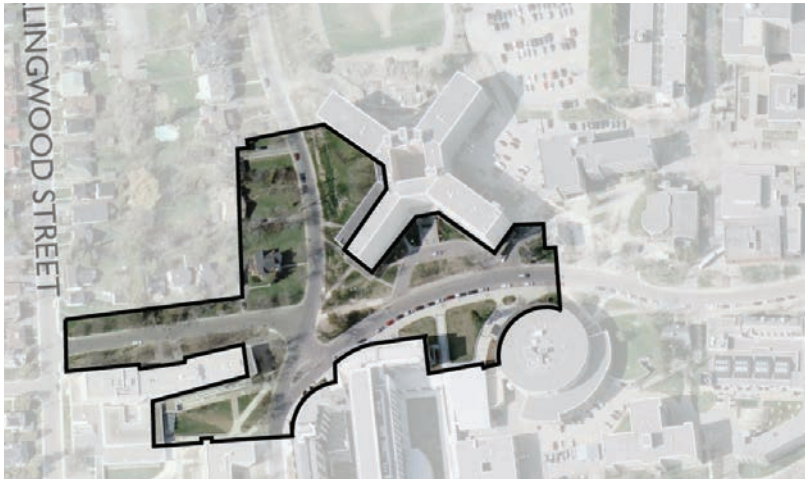


Figure 5-14
Victoria Green Existing Condition

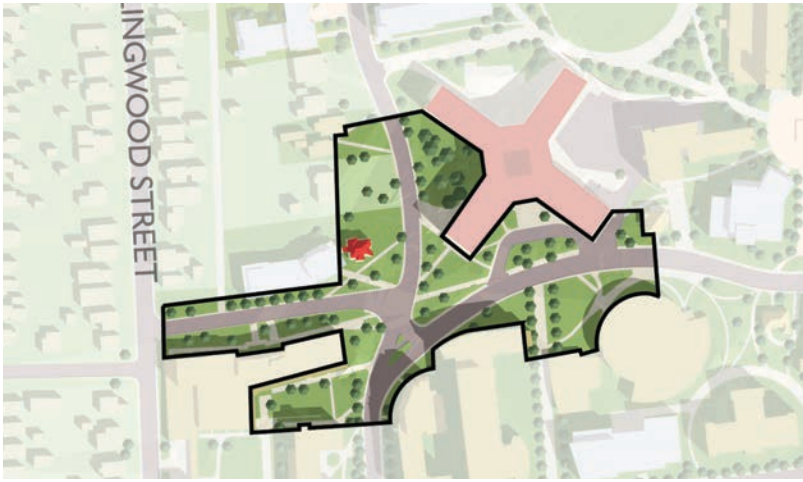


Figure 5-15
Proposed Victoria Green

Chown Hall Green

Chown Hall Green is the landscape that includes the space north of Chown Hall and east of Stirling Hall. The space is framed by these two buildings and is defined by the geometries of this architecture.

Recommendations

1. Chown Hall Green is in close proximity to the potential development site to the west of Chown Hall. The enhancement of this open space should be considered in conjunction with the development of this site.

2. Install curvilinear pathways framing the northern building face of Chown Hall and Stirling Hall.

3. Extend the green currently only in front of Chown Hall to reach Stuart Street.

Figure 5-16
Chown Hall Green Perspective

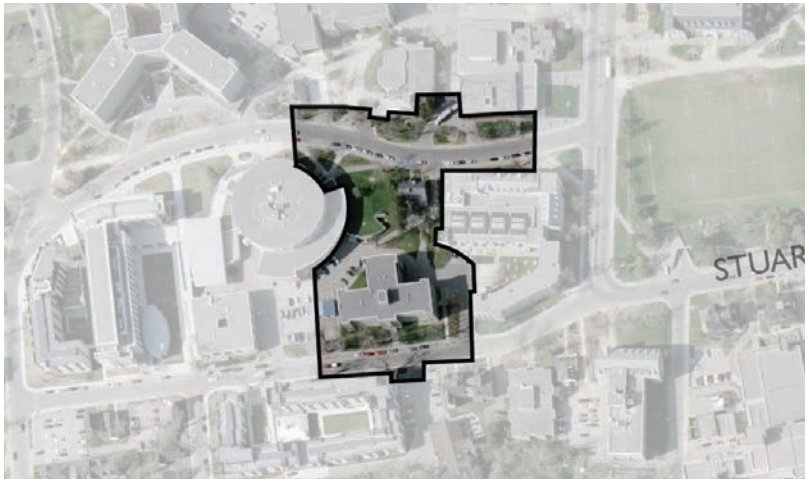


Figure 5-17
Chown Hall Green Existing Condition

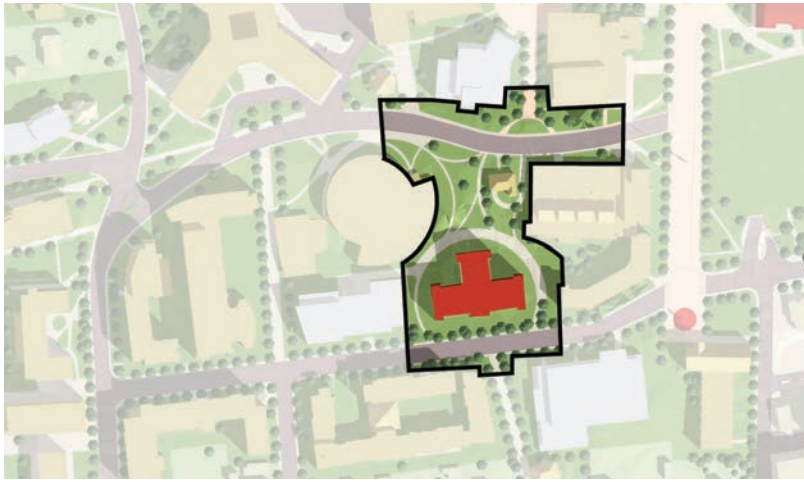


Figure 5-18
Proposed Chown Hall Green

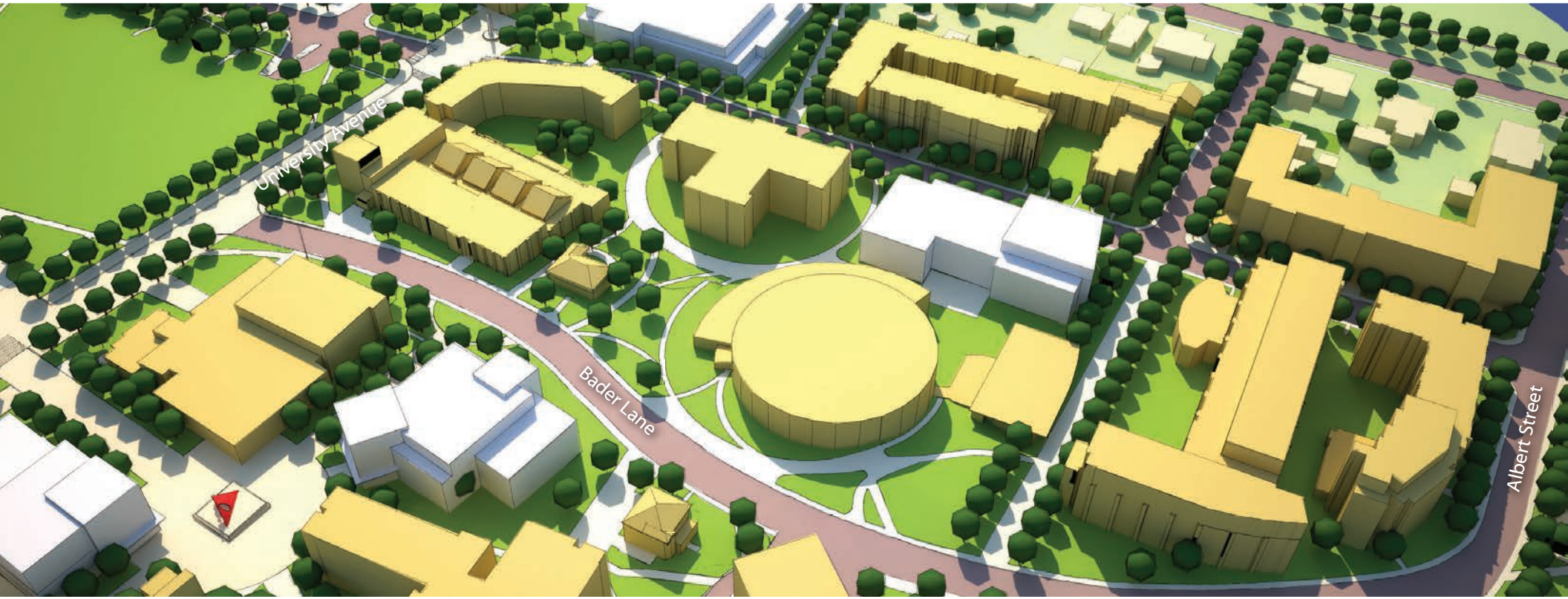


Figure 5-19
Formal Linear Landscapes

5.4.2 Formal Linear Landscapes

Formal linear landscapes – containing streets and walks – are linear open spaces designed to move people through the campus and provide views to landmarks and other campus-defining elements. Formal linear landscapes are recognizable by the repetition of similar design elements such as trees, paving materials and street furniture.

Formal linear landscapes are also defined by the design and placement of buildings and landscapes adjacent to them, and therefore adjacent uses must be considered in conjunction with the design of these spaces.

As a pedestrian-oriented campus, formal linear landscapes hold an important role as a way to make moving through campus intuitive, enjoyable, and memorable. The design and maintenance of these spaces must equally balance pedestrian movement and as well as aesthetics.

This section contains recommendations to enhance existing linear landscapes as well as a number of new spaces that would enhance the pedestrian and open space network.

As illustrated in Figure 5-19 the Formal Linear Landscapes on Main Campus consist of the following:

Landscape Projects:

A Chown Hall Walk **(L1)**
B Fleming Walk **(L2)**
C University Avenue Streetscape **(L3)**
D Union Street Streetscape **(L4)**
E Fifth Field Company Lane Streetscape **(L5)**

Additional Projects for Consideration:

F St. Lawrence Walk
G Clergy Street Streetscape
H George Street Streetscape
I Divison Street Streetscape
J Albert Street Streetscape

Cornell University

Princeton University

Recommendations

1. The design and treatment of paving should be consistent throughout all pathways to provide legibility.

2. All pathways should be aligned with other components of the pedestrian network. Where a path does not connect with another route, align the path to lead to a visual terminus.

3. To provide safe, well-lit routes, install pedestrian-scaled lighting either as stand-alone structures or as part of adjacent buildings.

4. Street furniture, such as benches, planters, and waste bins, provide functional purpose and also visual interest to linear landscapes. The installation of street furniture should be visually consistent, and placed in a manner that does not obstruct the pedestrian right-of-way.

5. Tree plantings should be continuous on either side of all pathways, to provide visual interest and to define linear landscapes.

Landscape Project L1

Chown Hall Walk

The Chown Hall Walk will be an exceptional gateway to Lake Ontario connecting Stuart Street to the waterfront. The attractive promenade will consist of an enhanced version of the path that currently exists south of the University Club as well as a new extension through what is currently the surface parking lot in front of the University Club as part of the potential LaSalle Site Redevelopment.

Situated between King Streets' waterfront homes and the University Club, this pathway will be generously wide and attractive, lined by trees and terminating with a new green south of the University Club.

Recommendations

1. With the redevelopment of the Film and Media Centre, re-design and install a continuous path that links Stuart Street with the waterfront promenade.

2. To ensure privacy with non-University neighbours as well as define the pathway, substantially-sized trees and plantings should be planted on either side of the walkway.

3. The design of this walk should be designed and integrated with an enhanced lawn south of the University Club. There should be a clear entryway to these areas and the two spaces should be designed to address and complement one another.

University of Toronto

Figure 5-20
Chown Hall Walk Perspective

Figure 5-21
Chown Hall Walk Existing Condition

Figure 5-22
Proposed Chown Hall Walk

Landscape Project L2

Fleming Walk

Fleming Walk will be a new linear green extending from Fleming Hall to University Avenue, framed by pedestrian pathways and a number of historic buildings including Douglas Library, Gordon Hall, and Ontario Hall. Located near Library Square, the Fleming Walk lawns could be used for festivities on special occasions, or as “collision spaces” for passive everyday recreational use such as eating lunch and meeting with friends.

The proposed realignment provides more movement options by creating double pathways located closer to adjacent buildings. These changes also consolidate the open space to create a more functional lawn for those to sit on and enjoy.

Recommendations

1. Extend the two parallel pathways that end at the Western loop of Fifth Field Company Lane westward to University Avenue. This will require the relocation of the current utility box at the south end of Douglas Hall as well as regrading .

2. The area between pathways should consist of high quality landscaping with large expanses of grass to provide an environment for sitting and gathering.

3. Fleming Walk should be integrated into the site plan and potential redevelopment of Clark Hall. A landmark element of the building should be incorporated into its design, providing a visual terminus at the eastern end and a special character for this landscape.

Princeton University

Figure 5-23
Fleming Walk Perspective

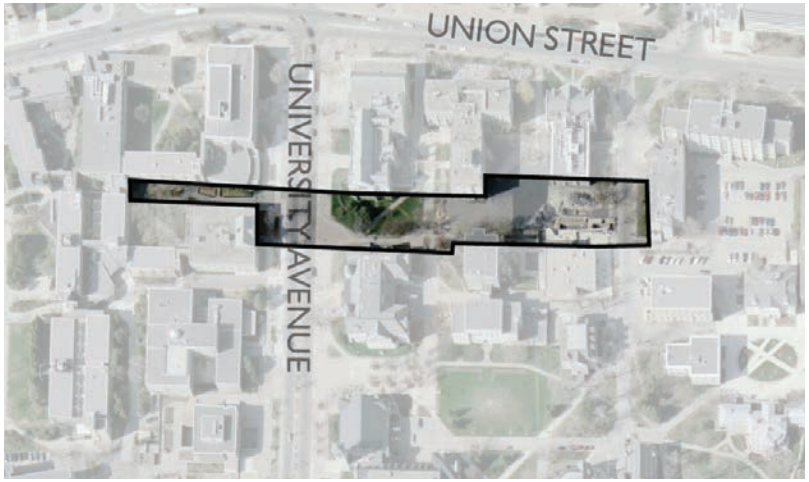


Figure 5-24
Fleming Walk Existing Condition

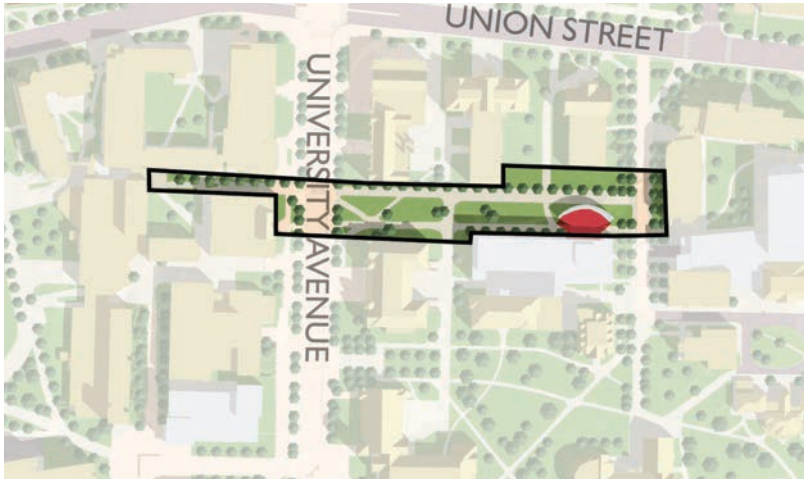
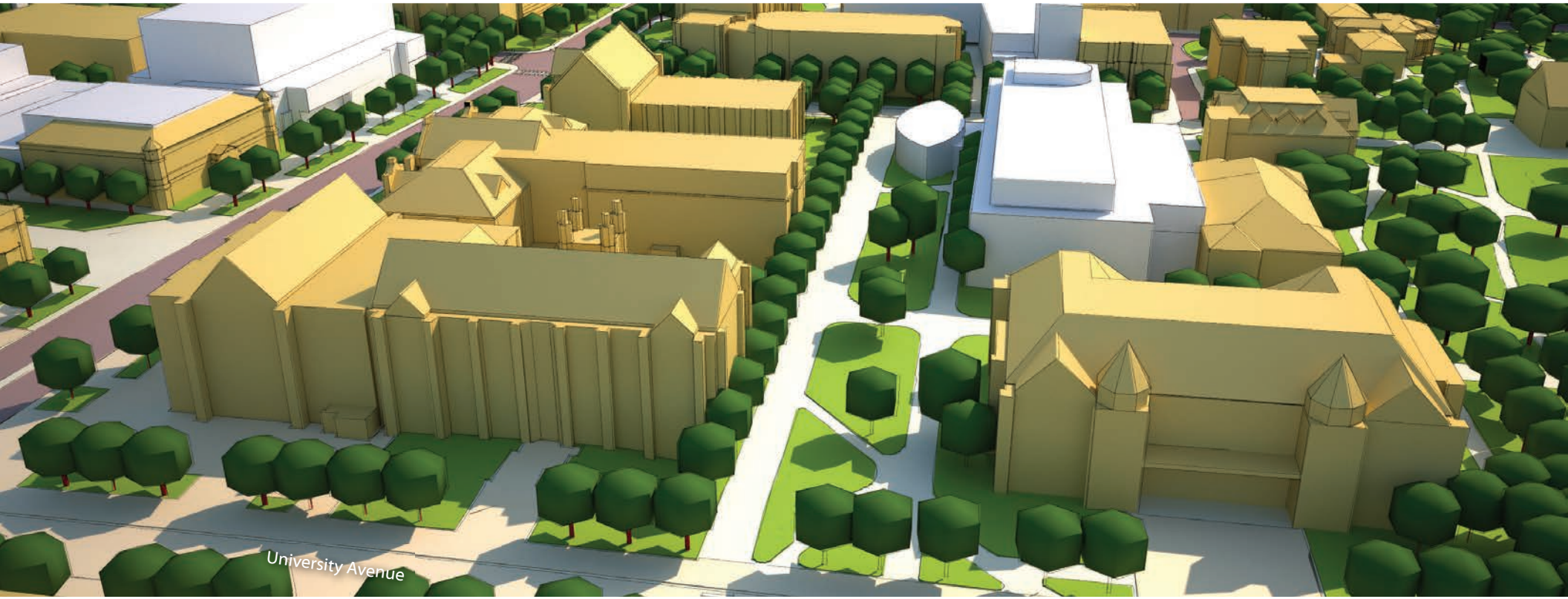


Figure 5-25
Proposed Fleming Walk



Landscape Project L3

University Avenue Improvements

University Avenue is a front door to Main Campus as well as its central artery. It is also an important connector to a number of walks, landscapes, and other components of the open space network. With some enhancements, it will provide a memorable setting to complement the iconic buildings that face it, while promoting safety and comfort for all through a street design that prioritizes all modes of traffic equally.

While there has been much important investment already completed to enhance University Avenue's image and reduce traffic speed, there are some simple interventions that can be made to better buffer the sidewalks from moving traffic, make the streets image more lush and beautiful, and create a truly great street. With a unified streetscape design, dedicated bike lanes will delineate the space used for vehicle and cyclists, and formalized pedestrian crossings at key intersections will prioritize pedestrians.

Recommendations

1. To better define the road, reinstall University Avenue's street furniture, including lamp posts, benches and planters, to the edge of the roads. In the future, additional trees should be planted in line with existing tree plantings.

2. At highly trafficked pedestrian crossings, install traffic tables, one or two metre wide raised pathways at key pedestrian crossings that prioritize the pedestrian over the vehicle.

3. To emphasize its role as the gateway from the north, extend University Avenue's special street design north of University to Earl Street.

4. Emphasize entries to other components of the open space and pedestrian network through paving treatment and landscaping.

University of Toronto, St. George Street

Figure 5-26
University Avenue Perspective

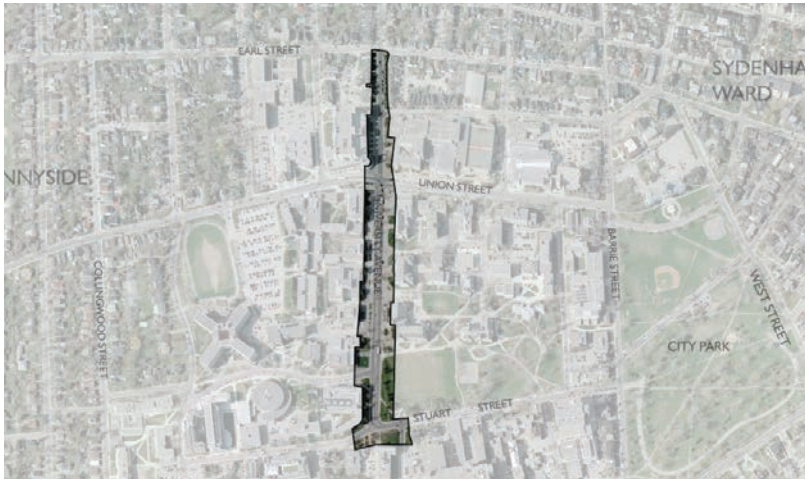


Figure 5-27
University Avenue Existing Condition

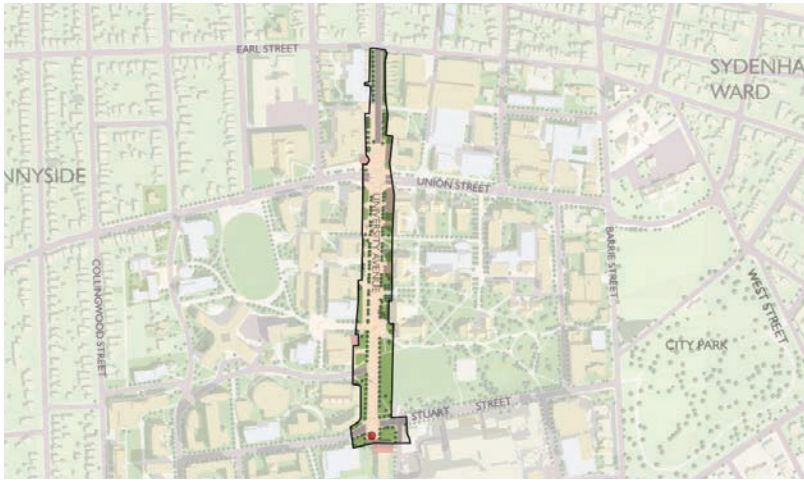


Figure 5-28
Proposed University Avenue

Landscape Project L4

Union Street Improvements

Union Street is Main Campus' other primary street, connecting Main Campus to West Campus. Whereas University Avenue is Queen's ceremonial street, Union Street is the campus' most used street, providing the address for many of Queen's most highly-trafficked buildings, including Stauffer Library and John Deutsch University Centre. It will continue to be a prominent address with two of Main Campus' major development opportunities located here.

In concert with this Plan's recommendations for Library Square (detailed in Section 5.4.3), public realm improvements are proposed on the portion of Union Street between Albert and Barrie Street to reinforce the safety and comfort for pedestrians, and enhance the quality of the setting.

The streetscaping that currently exists on portions of Union Street should be extended along the entirety of the Main Campus segment on both sides of the street. The introduction of planters or other street furniture elements would better define the street's edge, create connectivity and provide visual interest.

Recommendations

1. In coordination with the design recommendations proposed for Library Square (and the recommendation in the LAMP), design and implement a consistent streetscape for Union Street that includes both sides of the street and extends from Alfred Street to Barrie Street.

2. Consider the continuous installation of planters, benches, and other street furniture to provide visual interest to the streetscape, and provide places to rest.

University of Toronto

Rutgers University

Figure 5-29
Union Street Perspective

Figure 5-30
Union Street Existing Condition

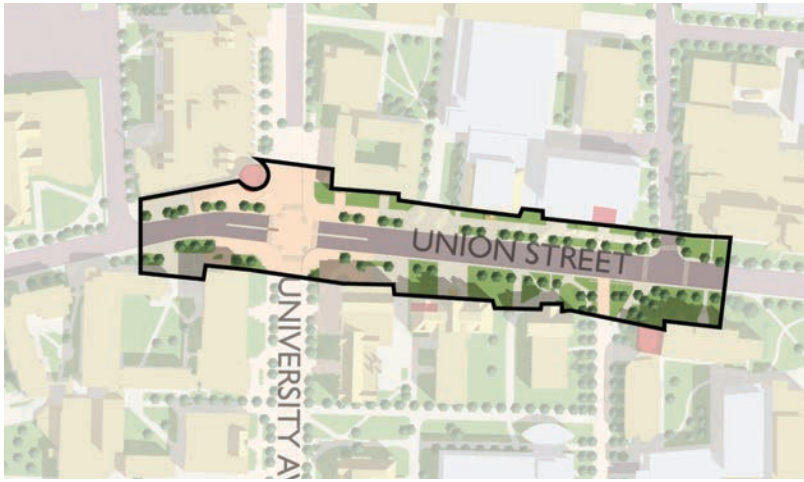


Figure 5-31
Proposed Union Street

Landscape Project L5

Fifth Field Company Lane Improvements

Design enhancements to Fifth Field Company Lane will transform what is today a service lane with a fragmented system of sidewalks to a beautiful and inviting pedestrian connection. With enhancements, it will become a route that prioritizes the pedestrian, while recognizing the need to carry service vehicles. It will connect Theological Hall to Union Street, and align with Division Street, ultimately forming part of a larger north-south route.

University of Toronto

Recommendations

1. Re-design Fifth Field Company Lane to signify it as a pedestrian-priority street. This may include special paving or rolled curbs.

2. To define the lane and provide shade, plant a double row of street trees on either side of Fifth Field Company Lane.

3. Improve pedestrian connections to ensure the north end of Fifth Field Company Lane orients in a diagonal to the northeast to align with Division Street.

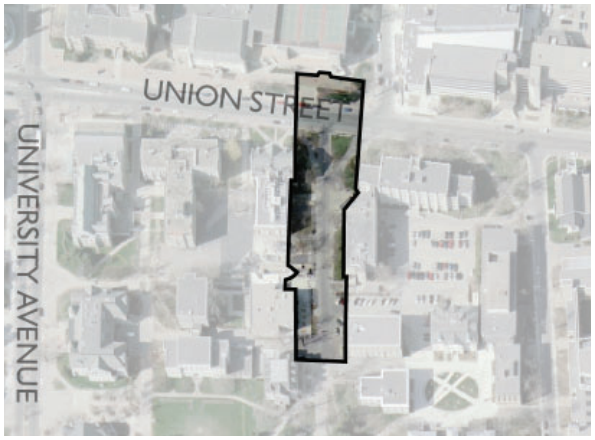


Figure 5-32
Fifth Field Company Lane Existing Condition

Figure 5-33
Proposed Fifth Field Company Lane

▲ Figure 5-34
Fifth Field Company Lane Perspective

Figure 5-35

Fifth Field Company Lane Existing Perspective

Figure 5-36

Fifth Field Company Lane Proposed Perspective

Other Projects for Consideration

St Lawrence Walk

St. Lawrence Walk is the pedestrian connection that runs as a northern continuation of St. Lawrence Avenue between Chernoff Hall and Chernoff Auditorium and the Rideau Building. The potential redevelopment of the Rideau Building will provide an opportunity to enhance this path, and align new development to allow an important view to Lake Ontario from Chown Hall. This is one of many enhanced apertures to the water proposed in this Plan including Chown Hall Walk.

Streetscape Improvements

Other Main Campus streets, including Clergy Street, George Street, Division Street, and Albert Street should also be considered for streetscape improvements. Such improvements include continuous street trees or plantings which define the streets edge, as well as surfacing improvements, and the addition of street furniture or public art.

Cornell University

Princeton University

Cornell University

EARL STREET
SYDENHAM WARD
SUNNYSIDE
A
UNION STREET
UNIVERSITY AVENUE
BARRIE STREET
COLLINGWOOD STREET
C
B
WEST STREET
CITY PARK
STUART STREET
C
KING STREET
LAKE ONTARIO

5.4.3 Plazas, Courtyards and Small Greens

Whereas the picturesque landscapes of Queen's Quadrangle and Tindall Field provide settings capable for holding celebrations, large gatherings and activities, the plazas, courtyards, and small greens of the campus provide casual settings for day-to-day campus activity. They are the place for more passive uses such as meeting friends, studying, or taking a break between classes.

A number of new plazas, courtyards, and greens are proposed to create more opportunities around campus to sit, rest, and socialize.

As illustrated in Figure 5-37 the Plazas, Courtyards and Small Greens on Main Campus consist of the following:

Landscape Projects:

A Library Square **(L6)**
B Arts Square **(L7)**
C McLaughlin Square **(L8)**

Figure 5-37
Plazas, Courtyards and Small Greens

Recommendations

1. Plazas, courtyards, and small greens should be distributed evenly throughout the campus.

2. Where a new plaza, courtyard or small green is incorporated with the design of a new development, ensure adjacent development addresses the open space with windows, entrances, and considers "spill-out" uses such as cafe patios to animate the space.

3. Plazas, courtyards, and small greens should provide a variety of places to sit and rest. This may include benches, tables and chairs, or landscaping features (large, raised planters) with inherent sitting features.

4. Street furniture, such as benches, bike parking facilities, and waste bins shall generally be arranged at the periphery of these spaces so as not to obstruct views or pedestrian movement through these spaces.

Princeton University

Macquarie University

Landscape Project L6

Library Square

Library Square will be a new identity for the intersection of Union Street and University Avenue, transforming this highly-trafficked intersection into an exceptional and dynamic public realm. It will be a place of social and intellectual engagement, where the essential functions of Stauffer and Douglas Libraries more fully engage with the campus outside their doors, and with the community beyond.

Through a unified streetscape, enhanced landscaping and the installation of outdoor seating and patios, Library Square will become a social space to meet, study, collaborate with others, and make meaningful connections. The re-envisioning of this intersection will be coupled with the appropriate traffic calming measures discussed in the mobility section of this Plan.

Recommendations

1. A landscape streetscape plan for Library Square should be developed to address the recommendations described herein and should allow for incremental improvements.

2. A unified paving treatment – distinctive from standard asphalt paving – should expand across the entire square. This treatment will unify Library Square and signal to vehicles that they are entering a pedestrian priority zone.

3. Unified streetscape elements, such as distinct lighting, banners, and street furniture should be designed and implemented in this area.

4. Street furniture should be located adjacent to buildings along Union Street and located closer to the street's edge along University Avenue, in order to comply with the streetscape enhancements for University Avenue identified in Sections 4.5 and 5.4.2.

5. In consultation with the City, a high priority pedestrian crossing, such as a "scramble," should be installed at the University Avenue and Union Street Intersection.

Figure 5-38
Library Square Perspective

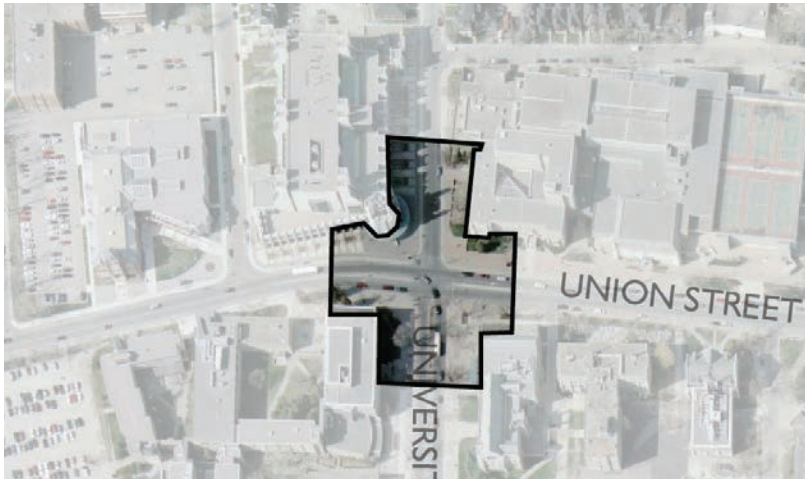


Figure 5-39
Library Square Existing Condition

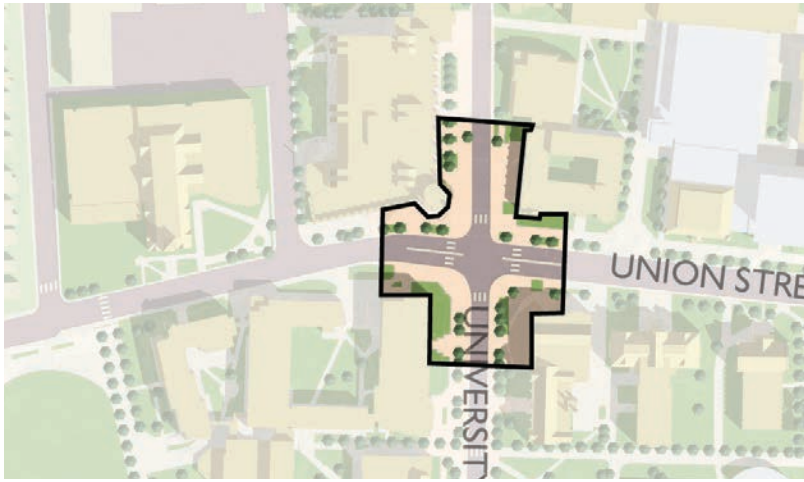


Figure 5-40
Proposed Library Square

Landscape Project L7

Arts Square

The Arts Square will be a dynamic new plaza with a bold design reflective of the Arts Faculty and Agnes Etherington Art Centre it sits adjacent to.

The project will be brought forward with the redevelopment of Jeffery Hall, replacing what is currently a series of asphalt walkways. The design of this area will be unified and formalized as a plaza for gathering or solitary activities. The Arts Square will consist of interesting plantings and public art, and offer an intimate setting with a memorable view of the Grant Hall clock tower.

Recommendations

1. Consider the centre of the Arts Square as a priority location for public art.

2. Consider design features, such as special paving, that distinguishes the Arts Square from connecting pathways.

3. In its redesign, incorporate ample seating and tables for everyday use. Ensure the placement of these and other street furniture does not obstruct pedestrian traffic patterns.

Figure 5-41
Arts Square Perspective

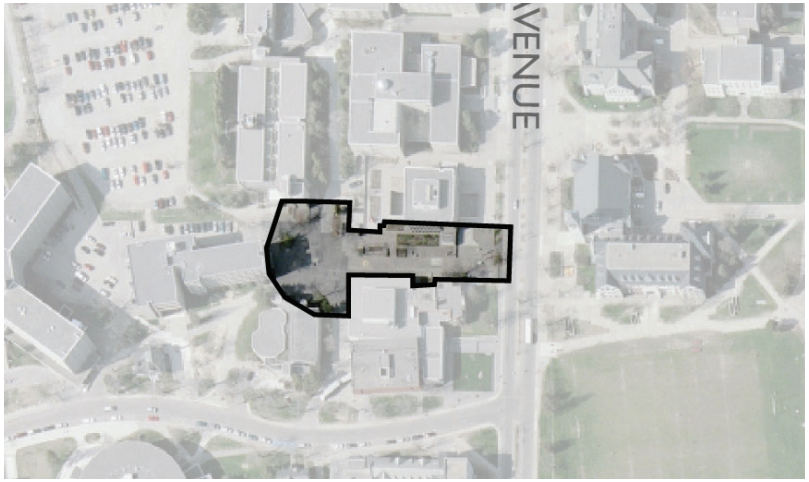


Figure 5-42
Arts Square Existing Condition

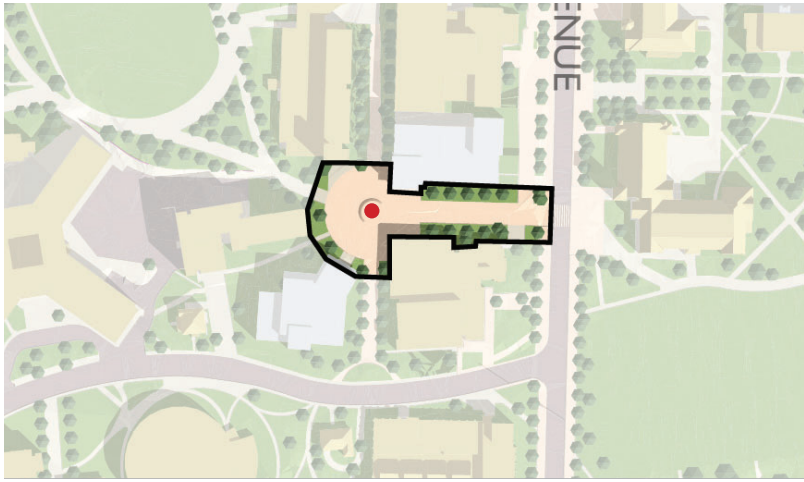


Figure 5-43
Proposed Arts Square

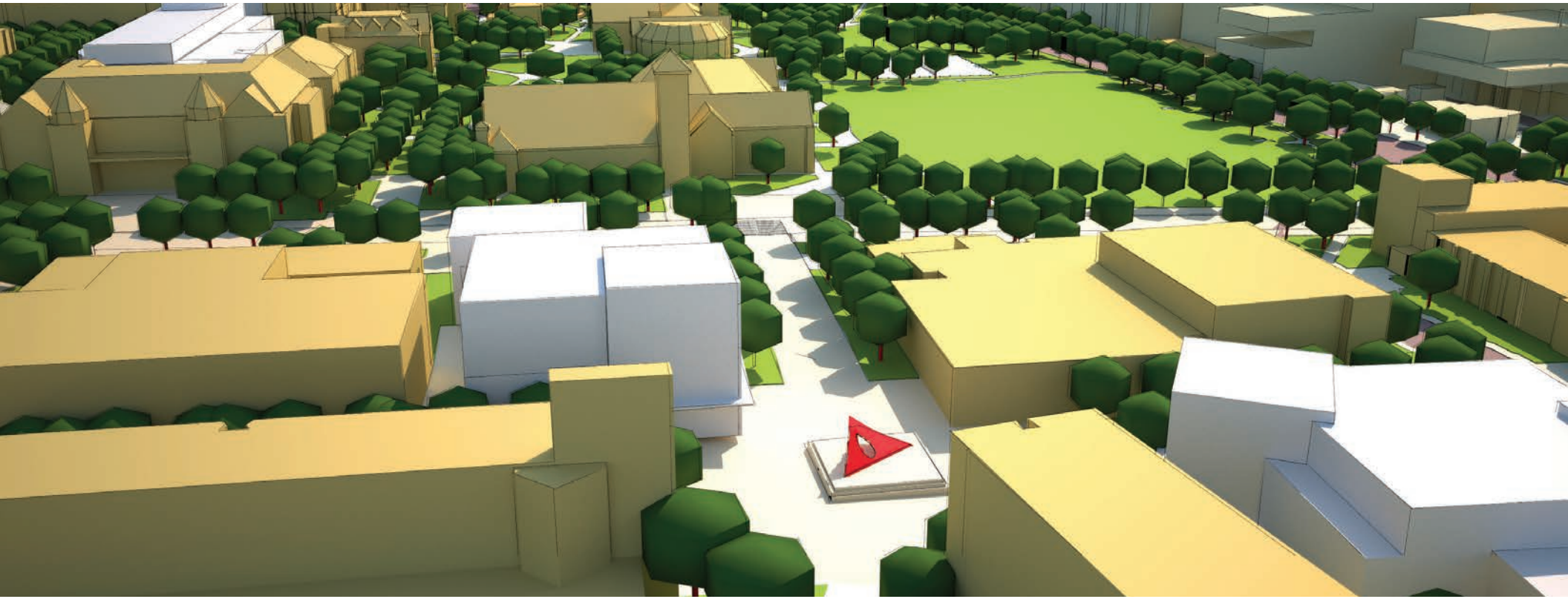


Figure 5-44
Arts Square Existing Perspective

Figure 5-45
Arts Square Proposed Perspective

Landscape Project L8

McLaughlin Square

McLaughlin Square will be a new addition to the University's open space network, providing views to the Queen's Quad and, potentially, Lake Ontario. The square itself will be a defining visual terminus to those traveling south on University Avenue.

It will be a hardscaped square consisting of public art and dynamic design features. Large enough in size to hold small-scale special events and in close proximity to Lake Ontario, it may be considered an area to celebrate the narratives of Queen's and Kingston's First Nations Communities. This may be achieved through temporary programming, or more permanent public art and design elements.

Recommendations

1. The redevelopment of McLaughlin Square should be designed and installed as part of the potential redevelopment of the La Salle Building.

2. With the redevelopment of the La Salle Building, explore opportunities to re-arrange plantings and regrade the site to allow for views to Lake Ontario.

3. In designing McLaughlin Square, consider the placement of public art in relation to its role as a view terminus from University Avenue.

4. The placement of public art, seating and landscaping should have regard to the entry of McLaughlin Hall, and should not obstruct pedestrian movement patterns.

Figure 5-46
McLaughlin Square Perspective

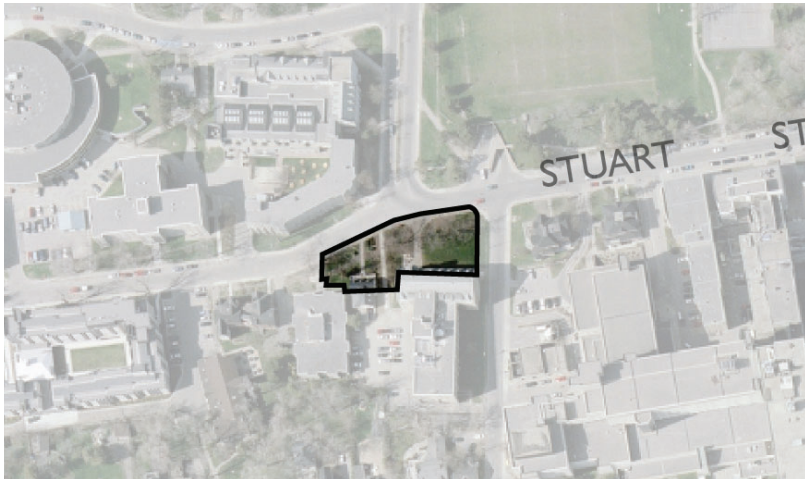


Figure 5-47
McLaughlin Square Existing Condition

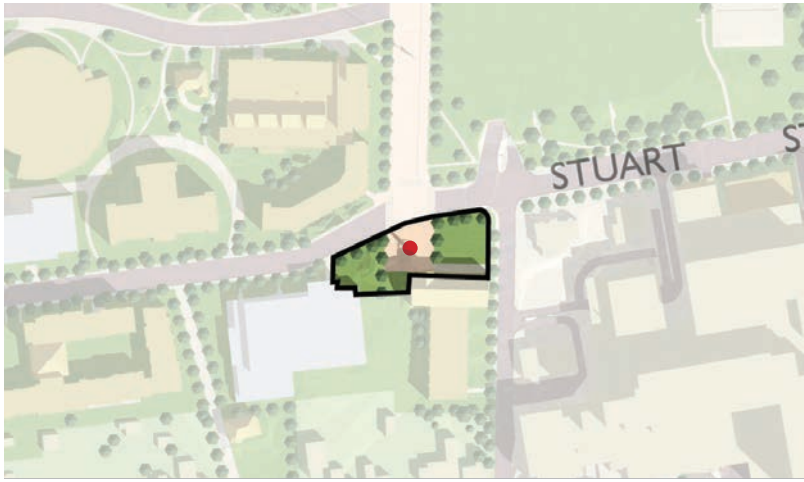


Figure 5-48
Proposed McLaughlin Square

G1
G2
G3
G4
G5
EARL STREET
SYDENHAM WARD
SUNNYSIDE
UNION STREET
UNIVERSITY AVENUE
BARRIE STREET
WEST STREET
CITY PARK
COLLINGWOOD STREET
STUART STREET
KING STREET
LAKE ONTARIO

5.4.4 Gateways

Gateways are the places within the larger open space network that mark the transition from the City to the campus. The design of buildings, streetscapes and public spaces can enhance the sense of arrival (or departure) from these key locations. Together, these measures enhance the experience of place as well as assist wayfinding for the University community and visitors. Gateways vary in prominence and environment, and the design of these should respond accordingly.

Unlike many other campuses, there is no single predominant gateway to the Queen's Campus. Identifying and prioritizing gateways can help distinguish Queen's place in Kingston. Illustrated on the plan to the left are five major gateway opportunities (which are also University Projects) as well as a number of secondary gateways which should receive enhanced landscaping attention, but will not provide the same grand sense of arrival. The following describes the importance and role of each of these gateways.

University Avenue / Earl Street Gateway (G1)

The intersection of Earl Street and University Avenue is the entryway from the north of campus. While not as predominant a street in the City as Division Street, University Avenue carries large amounts of foot and car traffic from those entering from the Williamsville neighbourhood.

Divison Street / Earl Street Gateway (G2)

As one of the City's major arterials and a key connector between the University and Williamsville, Division Street and Earl is a prominent gateway from the north of campus.

Union Street / Barrie Street Gateway (G3)

The intersection of Union Street and Barrie Street is the eastern terminus of Queen's busiest street and a predominant entryway from the Old Sydenham Ward.

King Street / Albert Street Gateway (G4)

The intersection of King Street and Albert Street is where you first enter the University from the waterfront, Portsmouth, and the Isabel Bader Centre for the Performing Arts.

Union Street / Albert Street Gateway (G5)

This is where you first enter the Main Campus if traveling from West Campus, Portsmouth, or the Sir John A. Macdonald Boulevard exit. This gateway will be reinforced by a new building at the southeastern corner, which should include an architectural element. The redevelopment of this site should incorporate clear wayfinding signage directing visitors to major points on campus.

The following are additional gateway intersections that are suitable for minor landscape enhancements as well as improved arrival and wayfinding signage:

- **Barrie Street and Clergy Street**
- **Albert Street and Bader Lane/Queen's Crescent**
- **King Street and Barrie Street**
- **Barrie Street and Professor's Walk**
- **Barrie Street and Stuart Street**
- **Earl Street and Aberdeen Street**

Figure 5-49
Main Campus Gateways

5.4.5 Summary of Main Campus Landscape Projects

The plan on the opposite page highlights the array of landscape projects described in this section. Their integration with new development, as well as other design and implementation considerations, are described in Part 2 of this Plan.

Formal Linear Landscapes:

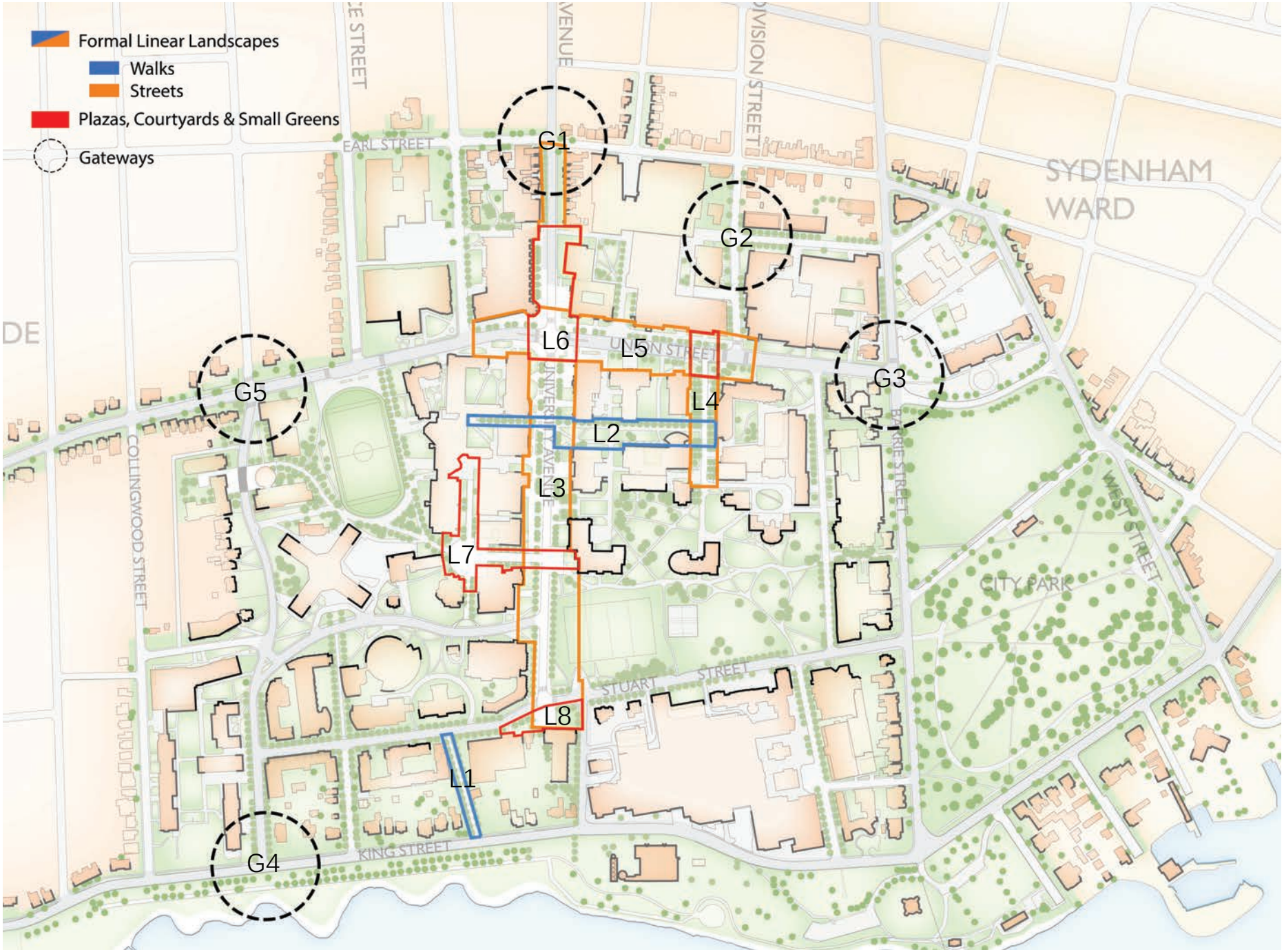
L1 Chown Hall Walk
L2 Fleming Walk
L3 University Avenue Improvements
L4 Fifth Field Company Lane Improvements
L5 Union Street Improvements

Plazas, Courtyards and Small Greens

L6 Library Square
L7 Arts Square
L8 McLaughlin Square

Gateways:

G1 University Avenue / Earl Street Gateway
G2 Divison Street / Earl Street Gateway
G3 Union Street / Barrie Street Gateway
G4 King Street / Albert Street Gateway
G5 Union Street / Albert Street Gateway



▲ Figure 5-50

Main Campus Landscape Projects Summary

5.5 Movement

A comprehensive and well-considered movement network is an integral component of an attractive and functioning campus. The streets and walks that make up the movement system are also key parts of the campus' open space network. They are the some of the most highly frequented common spaces where people meet and build relationships with other members of the Queen's community. With campuses designed as pedestrian environments, and to ensure Queen's promotes sustainable, active transportation choices, it is important that the Queens' movement network maintains its functionality while prioritizing pedestrian safety and comfort.

Main Campus' existing compact layout and extensive pathway system already provides the Queen's community with a comfortable and extensive movement network that could be viewed as a model for other campuses. However, there are improvements to be made to better integrate different modes of travel – pedestrians, cars, and cyclists – to ensure a more connected, safer, and inviting environment for all. This section provides direction regarding all components of the Main Campus movement network, including the pedestrian, vehicular, cycling, parking and servicing networks.

5.5.1 Pedestrian Network

At Queen's, the pedestrian experience is the campus experience. While people get to campus using a variety of transportation modes, once they have arrived, the majority of students, staff and faculty use the campus' extensive pedestrian network to get from class to class, meeting to meeting, or simply to take a stroll to get some fresh air and give their mind a break. For these reasons, a pedestrian network must be both extensive, providing many direct routes to get to different points on campus, as well as an enjoyable experience in order to encourage people to walk.

The pedestrian network consists of a number of different components. It includes the sidewalks of the campus' streets, the extensive pedestrian outdoor pathway system, as well as the internal hallways of larger complexes such as Mackintosh-Corry Hall and Queen's Centre. Together these generally create an extensive, fine-grained system. Much of this system is a result of Main Campus' historic nature. The original campus layout was determined at a time before the rise of the private automobile, and also at a time where the size of institutional buildings were smaller. As a result much of Main Campus' historic core is characterized by the siting of institutional buildings as relatively independent pavilions, usually situated within an extensive pathway network.

Prioritizing sustainable transportation

Designing Main Campus for pedestrians, cyclists and those with mobility-related disabilities is a priority. Main Campus will continue to be defined as pedestrian-oriented, where pedestrian activity is the most important mode of travel. Where the pedestrian priority zone interfaces with vehicle routes, mediation is required to ensure safety and to maintain pedestrian priority. Mediation would include more frequent and safer street crossings as well as enhanced landscape treatment that define pedestrian rights-of-way. The vehicular network section provides recommendations for interventions to make Main Campus' streets more friendly to the pedestrian network.

Extending a fine-grained pedestrian network to the campus edges

As teaching, learning, and research have evolved, there has been a need to construct larger complexes that are often twice or even three times the size of the campus' historic buildings. These complexes, such as Queen's Centre and the Biosciences Complex are often located at the periphery of campus. The few remaining major development sites (see Section 5.3) are also located on the periphery of campus. With an outdoor pedestrian network defined by the size and shapes of buildings and blocks, this shift in facility need has resulted in a pattern of buildings and pedestrian network at two different scales. To ensure that the need for larger complexes does not compromise Main Campus' extensive fine-grained and historic pedestrian network, it is fundamental that the design and placement of these buildings consider how their internal hallways align with the outdoor network, and internally provide a similar offering of multiple route options, breaking the larger building into smaller parts. In addition to ensuring consistent alignment, the design of

entrances – by using transparent materials and utilizing clear, direct sight lines – will contribute to a successful integration of internal and external pedestrian networks.

Priority Areas for Pedestrian Connection Improvement

In addition to the general objective of designing new buildings to integrate with the pedestrian network, there are two areas on campus where the fine-grained pedestrian network have been disrupted. These should be considered priority areas for improvement and are illustrated in the Figure 5-51 to the right.

The first priority area is the north-south connection connecting the foot of Aberdeen Street to Union Street. Currently the block bounded by Union Street, University Avenue, Earl Street, and Division Street has a longer block length than the blocks to the east and west. As a highly frequented district with the highest concentration of student services, better north-south connections are needed. With the potential redevelopment of the Physical Education Centre, an indoor or outdoor connection linking Aberdeen Street to Union Street should be incorporated into the design of the new facility.

The second priority area is the northern edge of Stuart Street at Queen's Quadrangle which does not currently contain a sidewalk. One principle to a comprehensive and safe pedestrian network is to ensure all streets contain sidewalks on both sides of the street. The installation of sidewalks on this portion of Stuart Street should be coordinated with the City and incorporated with any enhancements to Queen's Quadrangle (described in detail in Section 5.4.1 of this Plan).

Enhancing Walks and Paths

Essential to a well-used Pedestrian Network is that its routes are comfortable and enjoyable. The walks and pedestrian paths of Main Campus are also part of the Open Space Network. The Open Space Network Section of this document provides a number of recommendations to enhance existing walks, the creation of new ones, and the re-balancing of existing service lanes to prioritize pedestrian movement. These recommendations can be found in Section 5.4.2, "Formal Linear Walks."

Accessibility

As part of this Plan's commitment to ensure the campus is accessible to all, new additions or improvements to the pedestrian network should incorporate universal design elements such as curb cuts, narrow inclines, and even grading.

1. The continued maintenance and enhancement to the pedestrian network should be considered a priority in order to ensure a continued safe, walkable, and accessible Main Campus. Enhancements should aim to create protected and inviting routes. Design considerations should include:
   - Continuous, identifiable paving
   - Framing and protective elements such as trees or planting
   - The incorporation of street furniture such as benches to provide places to rest. These should be located on either side of the path but should not obstruct the pedestrian right-of-way
   - Regard for Design for Crime Prevention through Environmental Design (CPTED) principles

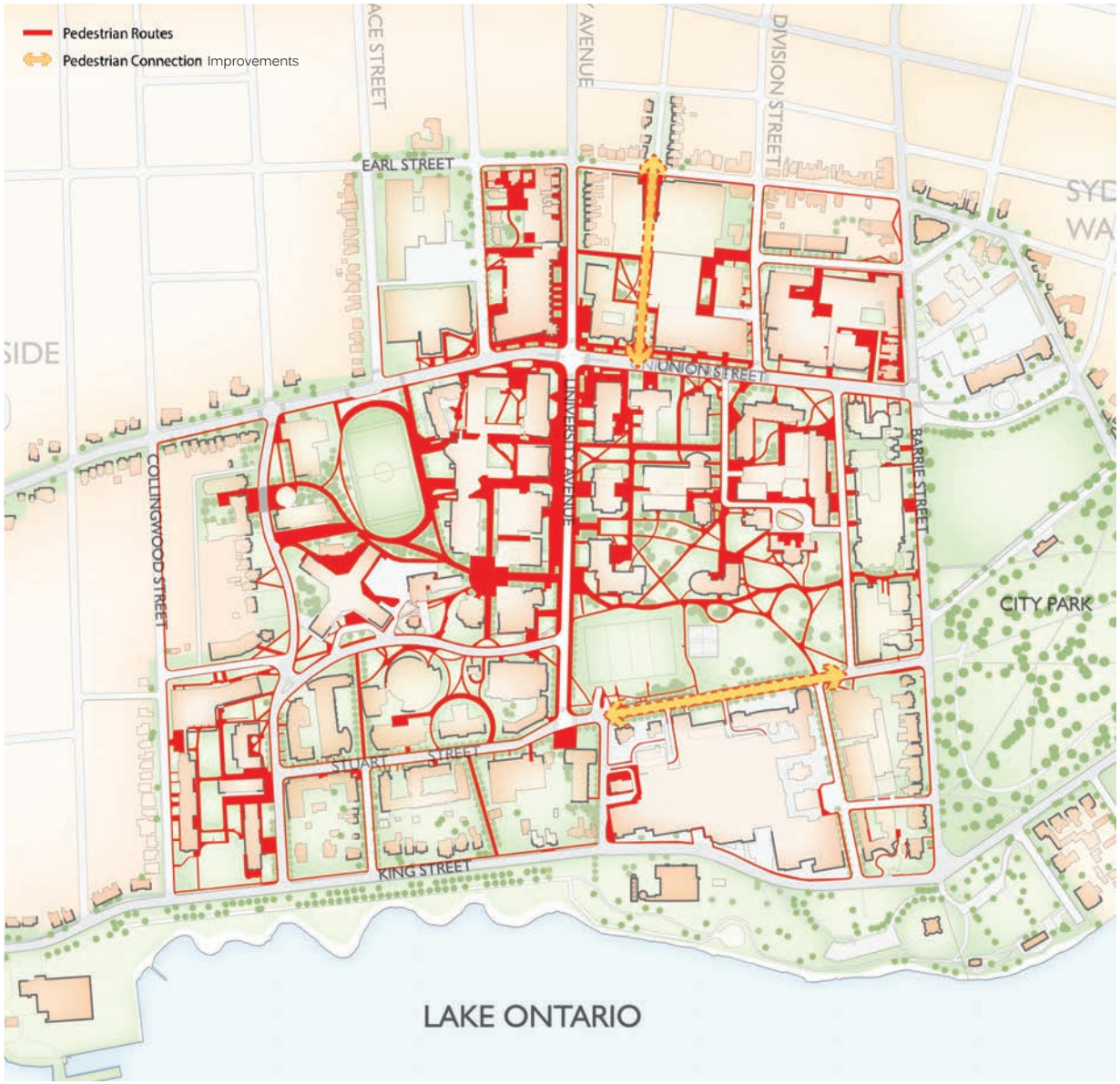
2. Pedestrian activity should remain at grade and be designed in accordance with Queen's Accessibility Guidelines to accommodate those with mobility-related disabilities.

3. Walks and pedestrian pathways should be aligned with one another to ensure a continuous and co-ordinated network. Any new walk or re-alignment of an existing walk should be designed to join with other components of the pedestrian network.

4. When designing new buildings, ensure the placements of entries and exits align with existing pedestrian routes as illustrated on Figure 5-51. Entry ways should utilize transparent materials to provide a sense of porosity to the new building, indicating a pedestrian through-way.

5. For infill development sites that incorporate an historic building, ensure the existing circulation pattern is maintained by providing entries and entrances in alignment with existing pedestrian routes.

6. The University will work with the City to accelerate the installation of sidewalks on the south side of King Street to provide safer pedestrian movement options between Main Campus and the Isabel Bader Centre for Performing Arts.



▲ Figure 5-51
Main Campus Pedestrian Network

5.5.2 Street Network

As carriers of cars, people, cyclists and public transit, streets are an integral component of Main Campus' movement network. Consistent with the principle to prioritize sustainable transportation choices at Queen's, enhancements to streets on Main Campus can be considered at two dimensions. First is the re-balancing of streets themselves. This is achieved through reconsideration of a street's cross-section (the width and design of sidewalks, bike lanes, and travel lanes). The second consideration is to view the street and pedestrian network holistically and addressing points where the street network disrupts the continuity of the pedestrian network and poses safety issues to pedestrians. The design of streets on both Main and West Campus are discussed at the City scale in Chapter 4 and in further detail as they relate to the Open Space network in Section 5.4.2. This section focuses on the second consideration, regarding the disruption streets make to a continued and safe pedestrian network.

Figure 5-52 provides a number of locations on Main Campus where pedestrian crossings of different types can be installed or enhanced to shift priority to pedestrians over the vehicle. The majority of the recommendations in this section regard prioritizing pedestrian movement and promoting safe crossings within the Student Life Cluster (as illustrated on Figure 5-2). Both Union Street and University Avenue are important streets in the City of Kingston's broader road network with a role in moving vehicles, cyclists, and pedestrians. But with Main Campus as one of the areas in Kingston with the most pedestrian activity, both of these streets must be subject to better traffic calming in their portions that carry through Main Campus.

Priority Intersections for Improvement

The intersections of Union Street and University Avenue, Union Street and Division Street, and King Street and Albert Street are all highly-trafficked, significant crossings that require enhancements to increase pedestrian safety.

While the intersection of Union Street and University Avenue currently hosts a signalized intersection, it is considered by many as the "heart" of campus and is the location of the proposed Library Square (see Section 5.4.3). Accordingly, this intersection should receive further enhancements to prioritize the pedestrian and slow traffic. This can be accommodated through street design, but should also be an intersection considered for a traffic crossing that is re-programmed to allow for longer crossing times. Another option is the installation of a "pedestrian scramble". A pedestrian scramble stops both north-south and east-west traffic, and allows pedestrians to cross an intersection all ways for a period of time. A pedestrian scramble increases the duration and frequency for pedestrian crossing.

The intersections of Union Street and Division Street and King Street and Albert Street are highly-frequented pedestrian crossings that do not currently contain signalized intersections. With the near completion of the Isabel Bader Centre for Performing Arts and the introduction of a Kingston Transit Express Bus Route along King Street, this intersection will see increased pedestrian movement. To facilitate safer crossing at this intersection, either a signalized crossing or a pedestrian-activated crosswalk are recommended here.

Crosswalk Improvements

Figure 5-52 also indicates locations for crosswalk improvements. These are existing pedestrian crossings on University Avenue. Even with recent attempts to slow traffic on University Avenue, further interventions are required to create a safer pedestrian environment. Speed tables, a raised crossing for pedestrians, are proposed here that would give pedestrians priority over private vehicles while simultaneously calming traffic.

Figure 5-52
Main Campus Street Network

Recommendations

1. Prioritize pedestrian, bicycle and transit activity to all campus streets and advocate for these modes of transportation in any projects involving city streets.

2. Advocate for the installation of new or enhanced traffic crossings at key intersections for improvement, as indicated on Figure 5-52. The following specific directions will guide enhancements to these crossings:
   - To reinforce its role as the heart of campus, and to support significant pedestrian volume, the intersection of Union Street and University Avenue should receive an enhanced signalized intersection with longer pedestrian crossing times. The installation of a "Pedestrian Scramble" should be considered.
   - As a key intersection for movement between Main Campus and the Isabel Bader Centre for Performing Arts as well as a prominent cycling and transit route, the intersection of King Street and Albert Street should be the location of a new signalized traffic crossing or pedestrian-activated crosswalk.
   - To enforce reduced traffic speeds and safer conditions on Union Street, the intersection of Union Street and Division Street should be the location of a new traffic crossing or pedestrian-activated crosswalk.

3. To prioritize pedestrians and reduce traffic speed, advocate for the installation of speed tables at existing intersections on University Avenue as indicated on Figure 5-52.

4. To enhance pedestrian safety, advocate for the installation of new pedestrian crossings at locations indicated on Figure 5-52. The crossings should utilize one of the following techniques: special paving treatments at the pedestrian rights-of-way, highly-visible painted pavement markings, or overhead flashing lights.

5.5.3 Parking

Parking on Main Campus currently consists of surface parking, underground parking, and on-street parking.

Overtime, open space and building investments will displace surface parking to the point where surface parking may be relocated to West Campus, or that more structured or underground parking may be required on Main Campus. Should Queen's decide to develop underground parking, it can be accommodated on any development site whose building footprint is 120 square metres or more.

In the interim, surface lots will see enhanced landscape treatment (e.g. landscaped pedestrian paths, increased tree cover, pedestrian-scale lighting, smaller parking modules) to better reflect the quality of campus and ensure a safe pedestrian experience.

Queen's University

Princeton University

5.5.4 Cycling Network

As described in Section 4.3, a comprehensive, safe, and inviting cycling network promotes cycling as a desirable and primary transportation choice.

On Main Campus, a number of new cycling routes and pedestrian cycling routes are proposed, as indicated on Figure 5-53 on the opposite page. Proposed cycling routes are located on all of Main Campus' streets to promote cycling as a preferred route on campus. New cycling trails are proposed that would connect the University with City Park to the east and King Street to the South. While these pathways may be informally used today as cycling routes, their inclusion in the cycling network formalize this role, and any future enhancements to these trails should consider them part of the cycling network. New design standards will ensure trail rights-of-ways are wide enough to accommodate both cyclist and pedestrians and mitigate conflict.

Bike parking should be installed in the form of bike posts, rings or racks along cycling routes. The location of these should be out of the pedestrian right of way and should be placed in weather-protected areas where possible.

Enhanced bicycle parking facilities provide safe and secure locations for cyclists to store their bikes and help emphasize cycling as a promoted mobility choice. Enhanced bicycle parking facilities refer to higher-security bicycle parking such as bike lockers or bike cages. These may be in the form of a stand-alone structure outside of buildings, incorporated at grade level near entrances in new projects, or as secure parking in underground parking garages. Additional bicycle amenities would be suitable near the north entrance of the Queen's Centre. With existing shower and locker room facilities available for gym members, this is a location suitable for either dedicated showers for cyclists, or a program for cyclists to access existing facilities.

Recommendations

1. Bike Parking in the form of bike posts, rings or racks, should be located within 20 metres of cycling routes.

2. Include bicycle parking considerations in site planning for new developments including secure bike lockers, bike cages, and shower facilities.

3. Guided by Figure 5-53, incorporate installation locations for enhanced bicycle parking facilities as part of the cycling parking strategy, recommended in Section 4.3.

4. Due to its proximity to the Queen's Centre shower and athletic facilities, explore opportunities to provide secure bicycle parking in the existing underground garage beneath the Queen's Centre. Other underground parking facilities may also be considered for secure bicycle parking facilities.

Princeton University

Kingston Transit

Figure 5-53
Main Campus Cycling Network

5.5.5 Servicing Network

Unlike personal vehicles, servicing vehicles need routes that carry vehicles further into the campus to deliver goods, remove waste, and provide fire and emergency vehicle access. A number of service routes and service locations have been identified in Figure 5-54 on the opposite page.

The servicing strategy recommends retaining most existing service routes, but also proposes the re-alignment of some, including Fifth Field Company Lane (for a discussion of the proposed design changes to this lane, see Section 5.4.2). Also identified are service areas in existing and proposed development sites, as well as service zones that can accommodate more significant loading and "back-of-house" uses.

While the placement of some service routes are intentionally located to minimize disruptions with pedestrians, at many locations they are integrated with the pedestrian network and open spaces. In these places, the design of servicing functions needs to be thoughtfully considered and designed, so as not to disrupt the image and the quality of the campus setting.

Recommendations

1. Design building service areas to be oriented to service routes, screened from view and, where possible, integrated into buildings.

2. Consolidated service routes should be designed to ensure appropriate service and truck access to campus facilities.

3. Where service routes overlap the pedestrian network, they should be designed as high quality pedestrian spaces to discourage unsafe vehicular behaviour and reinforce the pedestrian nature of campus.

4. Explore opportunities for a central receiving facility on West Campus for larger delivery vehicles, supported by a fleet of smaller trucks to deliver goods to Main Campus facilities.

This servicing entrance at the New School of Medicine illustrates how service routes can be integrated into new development while minimizing disruption to the pedestrian network.

At Princeton University, smaller vehicles are used to minimize the infrastructure needed to support servicing requirements.

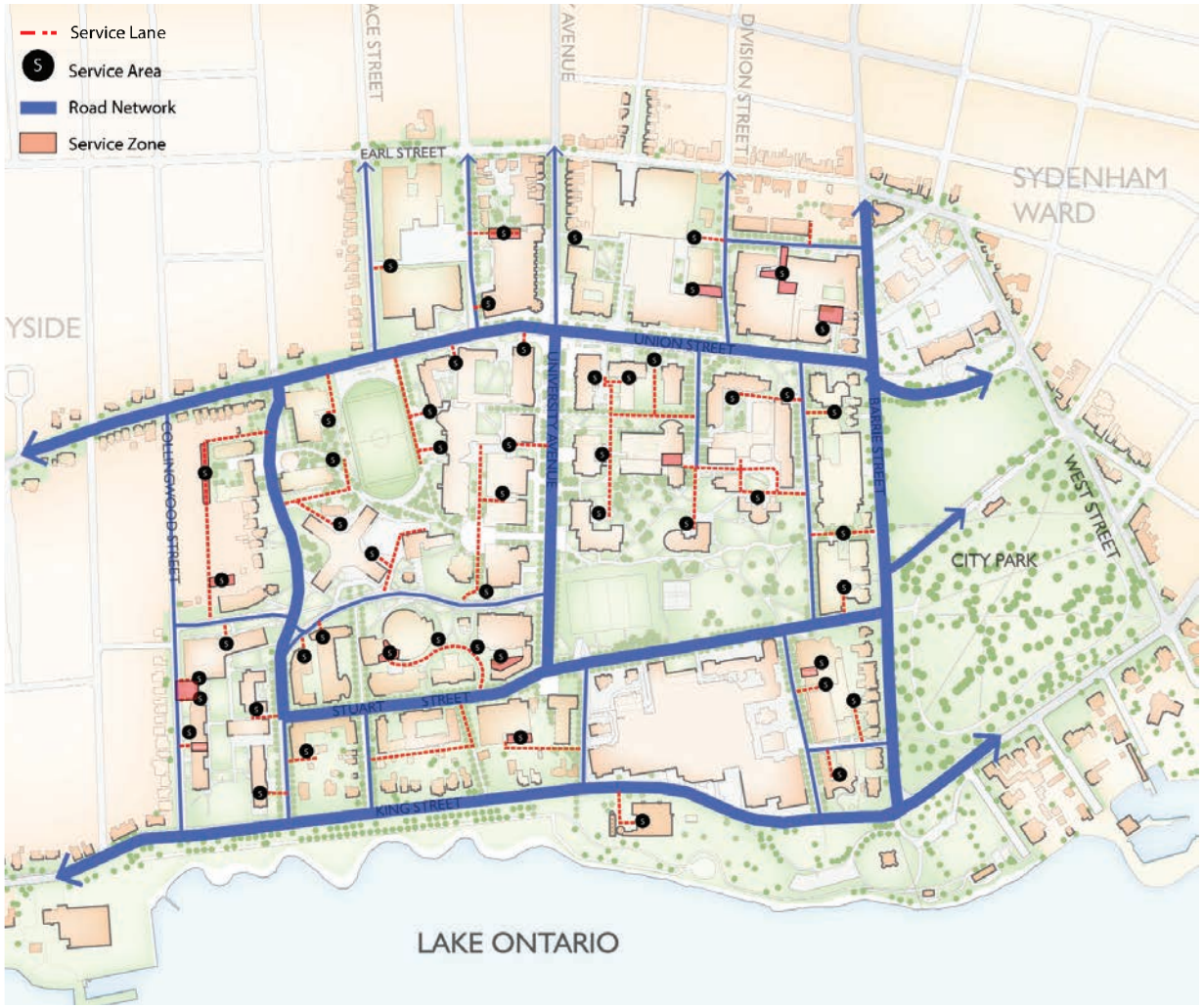


Figure 5-54
Main Campus
Servicing Network

5.5.6 Summary of Main Campus Movement Projects

The plan on the opposite page compiles the array of movement projects described in this section. Their integration with new development, as well as other design and implementation considerations, are described in Part 2 of this Plan.

Movement Projects:

M2 Union / University Intersection Improvements
M3 Union / Division Intersection Improvements
M4 King / Albert Intersection Improvements
M5 University Avenue Pedestrian Crossings Improvements

▲ Figure 5-55

Main Campus Movement Projects Summary

5.6 Utilities

The redevelopment identified as part of this Plan will impact and require upgrades to the existing utilities which support the Main Campus and West Campus. In addition to the base utilities, and understanding Queen's strong commitment to sustainability, there is also an opportunity to implement further upgrades to increase energy efficiency and develop a more resilient power system that can withstand severe weather events.

5.6.1 Main Utilities (Water, Gas, Sanitary and Storm Sewers)

The utilities within private University blocks are owned and maintained by Queen's. Within municipal right-of-ways, Utilities Kingston manages the City of Kingston's water and wastewater infrastructure systems, while storm sewers are owned and operated by the City of Kingston.

For the most part, wastewater from Main Campus is drained by gravity to an existing sanitary pump station near the Central Heating Plant south of King Street, which sends flows to the municipal sewage treatment plant. In general, sanitary sewers flow from north to south and collect in large trunk sewers on King Street. Although major blocks of the main campus have been separated in recent years, there are multiple locations where University sanitary sewers currently cross connect into combined municipal sewers. Combined municipal trunk sewers can currently be found on several streets in the northern and eastern portions of the campus such as George Street, Arch Street, Clergy Street, University Avenue, Earl Street, Alfred Street, Barrie Street and Okill Street.

Stormwater flows for the campus also generally drain from north to south with outfalls discharging to Lake Ontario at George Street, University Avenue, St. Lawrence Avenue and Collingwood Street.

A 600 mm diameter water-main on King Street is the major water source for the Main Campus. It supports 400 mm connections on Albert Street and University Avenue as well as a 300 mm connection on George Street to produce the water distribution system for the campus. A major line is also present across the campus on Union Street, which ranges from 400 to 500 mm in diameter.

Based on preliminary discussions with Utilities Kingston, it is understood that the sanitary and combined sewer systems in the vicinity of the Main Campus are at or near capacity. On-going infrastructure maintenance work is currently taking place throughout the City to separate storm and sanitary services, however, it is not known if and when sewers in the vicinity of the University will be separated because a long

Recommendations

term sewer separation program has not been established. Ongoing municipal maintenance work is also focused on increasing the capacity of the sanitary and water networks in critical areas of the City.

Due to the presence of combined sewers, special permission will likely be necessary from Utilities Kingston in order to connect into the surrounding municipal infrastructure, and it must be demonstrated that there is adequate capacity in the system for the proposed loading.

In order to connect to water and sanitary networks, a servicing assessment must be performed to determine if there is adequate capacity in the respective systems for the proposed loading.

1. Continued separation of combined sewers should continue throughout the campus property with the goal of eliminating all combined sewers where reasonably possible. This initiative will provide more flexibility for future development projects and reduce loading to the sewage treatment plant.

2. A pre-consultation meeting with City engineering staff is highly recommended in advance of proposed campus development in order to understand the servicing constraints and opportunities that may be present in the infrastructure surrounding the project area. The municipality may require small Functional Servicing Reports, which take a detailed look at local utility capacity surrounding proposed development, as part of the Site Plan Approval process.

3. Re-development within Main Campus may produce civil design challenges due to the presence of unknown or antiquated infrastructure. A detailed underground utility survey prior to the design stage of all projects will reduce surprises and help produce the most efficient civil design to support the proposed development project.

4. In response to municipal stormwater flow control guidelines, rooftop storage of rainwater should be considered as a means of reducing the size of underground storage units on highly congested project sites.

5.6.2 Electrical Power Distribution

The Queen's electrical distribution grid is managed by Queens' Physical Plant Services department. Main Campus is fed from four 44kV substations. Two are owned by Kingston Hydro (MS6 Centre Street and MS9 Division Street). One is owned by Kingston General Hospital (KGH), which is shared by Queen's. The substation under Tindall Field is owned by Queen's.

Currently electrical supply from these four sources is adequate for the buildings on Main Campus, however if two or three major buildings are added on campus, a fifth substation will be required. Queen's has 'shelled in' a room for a fifth substation in the basement of the New Medical building on the east side of campus.

Queen's owns and operates a 4160 Volt distribution system on Main Campus and West Campus which has been designed to incorporate several levels of redundancy. Buildings are typically fed through a loop distribution system on 5kV; with each building is fed from two separate sources. A program to replace lead lined, underground high voltage cables on Main Campus has been ongoing for the last several years and considerable progress has been made.

The Existing Co-Generation Plant is configured to back-up research-intensive buildings in the southeast portion of campus. The plant has the ability to provide electrical power to KGH and multiple campus buildings in the event of an extended utility grid power outage.

Recommendations

1. Power supply study for Main Campus should be updated with respect to redevelopment and new buildings included in this plan. Incoming 44kV services need be coordinated with City of Kingston and Kingston Utilities. Co-Generation Plant back-up capacities should be included in overall load calculations and redundant/emergency power sources analyzed.

5.6.3 Heating and Cooling

Heating Plant

The campus has a district heating system which supplies steam to both the Main Campus and West Campus and additionally to the Kingston General, Hotel Dieu and Providence Continuing Care Hospitals.

The existing steam plant is located in the Central heating Plant on King Street and comprises:

- A 150,000lb/hr dual fuel (gas/bunker oil) boiler installed in 1969
- A 150,000lb/hr bunker oil fueled boiler installed in 1974
- A 150,000lb/hr dual fuel (gas/diesel) boiler installed in 2009
- 2 x 7.5MW/75,000lb/hr gas fired cogeneration solar turbines installed in 2006

The current plant has some operational issues with regards to breaching pathways and as a result, restricts the combination of certain equipment. Overall this may affect the feasibility to use the total available capacity of the plant for future growth. The current plan is to replace the 1974 and 1969 boilers. The 2009 boiler and cogeneration turbines are relatively new and there is no plan to replace at this time.

Heating Infrastructure

Steam is distributed throughout the Main Campus and West Campus via piping of various ages ranging from the 1930s through to more recent upgrades in 2012. The majority of facilities are serviced by steam with hot water heat exchangers at each building. Where steam is not available, standalone boilers and gas fired rooftop units provide heat. As illustrated in Figure 5-56 the steam piping is direct buried in tunnel systems and broken into three main lines:

1. **West Campus Line**
   - The line runs west along Union Street and serves the West Campus, Providence Continuing Care and Queen's Donald Gordon Centre.
   - The piping is approximately 40 years old and in poor condition. Based on the distance and age, this would be expensive to repair.
2. **Central Line**
   - The line serves the Main Campus and Kingston General Hospital.
   - The piping varies in age and condition.
3. **East Campus Line**
   - The line serves parts of Kingston General Hospital, east side of campus buildings and the Hotel Dieu Hospital.
   - The piping varies in age/condition and the Hotel Dieu has considered detaching themselves from the steam line and replacing with a standalone heating system.

▲ Figure 5-56
Existing Steam Infrastructure

Cooling Plant/Infrastructure

On the Main Campus, cooling is typically dedicated to each building but there are satellite, chilled water, district cooling systems which serve multiple buildings.

Sustainability and Energy

Queen's has invested into programs and activities in an effort to reduce energy consumption and GHG emissions which include:

- In house and third party bill verification
- Carbon footprint accounting
- Building Automation Systems (BAS), nightly and weekend setbacks
- Precinct Cooling
- 20KW solar PV array
- Building level utility data tracking
- Lighting upgrades and scheduling
- Occupancy sensors
- Low flow fixtures for new construction
- Heat recovery within HVAC systems
- CO2 monitoring and HVAC control

The renewable and sustainable technologies which have merit at Queen's are as follows:

Geothermal

Kingston has desirable ground conditions which provide high thermal conductivities to support geo-exchange. If there is space to support a vertical borehole field, this is an efficient and cost effective way to provide district heating and cooling.

Deep Lake Cooling

This will be dependent on the available depths and temperatures available but based on the proximity to both campuses, this can be re-investigated.

Solar Thermal

In buildings with a high domestic hot water requirement/turnover, sports facilities and as a supporting system to a low temperature hot water heating system , solar thermal can be a viable option.

Waste Gasification

Depending on the available waste volume either from campus or sourced from the local community, waste gasification and alternative technologies to generate bio- fuel are possible. The bio-fuel can be used to feed co-generation turbines, boilers or fuel-cells to create heat and power. The feasibility of this system will be dependent on the available annual waste volume and a cost comparison against the existing TranCanada natural gas supply.

Responding to Queen's strong commitment to sustainability and performance benchmarks, there is an opportunity to implement measures to reduce energy consumption and GHG emissions as part of the master plan.

Recommendations

Building Systems

The current approach Queen's is taking to improve the efficiency of each building (existing and proposed) is a great first step. These low cost measures paired with upgrades to control systems and monitoring are cost effective solutions to reduce energy consumption. As the campus is heavily populated with older buildings and the population varies dramatically throughout the year, some examples to consider:

1. Improve insulation
2. Improve glazing
3. Decrease infiltration of air. This may be around windows, doors and transition between materials. Also consider creating heated/cooled vestibules at entryways.
4. Install energy efficient HVAC systems. In addition to energy efficient Air Handling Units, Heat wheel retrofits and new rooftop units, consider Variable Refrigerant Flow (VRF) systems, multiple Energy Recovery Ventilators (ERV), Lossnay heat/humidity exchanger retrofits as an example.
5. Install modular building systems. Based on the variance of occupancy in some buildings it can be more efficient to run multiple, smaller pieces of equipment than to turn down larger.
6. Heat recovery from larger building sources such as lecture theatres, sports facilities, pools, ice arenas and equipment labs.
7. Lower velocity, displacement ventilation systems within areas high occupancy, high ceiling heights. This also maintains a clean aesthetic in older buildings by eliminated overhead services.
8. Consider natural ventilation in transient, high occupancy spaces
9. Control systems via CO2 and Occupancy sensors.
10. Installation of PVs arrays
11. Consider installing individual meters within each building on campus, with users sharing savings from the current baseline.

Campus Systems

Based on their age, fuel source and efficiency, there is a requirement to replace two of the existing boilers in the central steam plant. In addition, some sections of the steam piping will need to be replaced, specifically the West Campus line. These requirements create an opportunity to consider alternative central systems.

As the distance between the two campuses is fairly large (approximately 2 kilometres), it makes sense to install an independent system and infrastructure for the West Campus.

The solutions for both Main Campus and West Campus which may be considered are described on the following pages.

Short Term

12. The simplest consideration would be to replace the existing 1974 and 1969 boilers with efficient gas fired alternatives fed from the main TransCanada line. The existing steam infrastructure can be replaced where needed to support and the Combined Heating and Power (CHP) turbines, installed in 2006, would supplement.

13. An independent gas fired CHP/steam plant should be installed to support the West campus directly.

14. In addition, the existing independent cooling systems which serve each building can be replaced with high efficiency alternatives. This may be new chillers or air handling units within each building.

15. Based on the total capacity of steam available from the plant, investigate installing absorption chillers to provide cooling from the steam generated by the CHP turbines. A cost analysis can be performed based on the annual load requirements.

Medium Term

16. To increase efficiency, consider replacing the existing steam system and infrastructure with an efficient gas fired hot water system alternative fed from the main TransCanada line. The existing CHP turbines would supplement the system via heat exchangers. An independent, gas fired hot water/CHP system should be installed to support the West campus directly.

17. The hot water system may be supplemented by solar thermal systems or recovered heat from independent systems such as de-humidification, swimming pools and ice arenas.

18. In addition, a central chilled water cooling system can be installed for the Main Campus and West Campus independently, to serve all buildings. A new infrastructure to support both systems will be required and can follow the heating routing.

Long Term

19. In an effort to meet the long term energy goals of the University, bring added efficiency and flexibility for both campuses, a geothermal system may be considered due to Kingston's desirable ground conditions to provide high thermal conductivity. This system would also provide cooling and an efficient combined infrastructure that can be scaled for existing and future expansion.

20. A central or multiple geothermal vertical borehole fields could serve individual building heat pump systems throughout campus wherever space is available. The fields would be supplemented by the existing CHP turbines. Through further examination, and depending on the existing infrastructure

Other Considerations

sizing, there may be an opportunity to re-use the pathways and piping as conduits for new infrastructure.

21. Due to the distance between the two campuses, the installation of an independent system and infrastructure for the West Campus is recommended. This could also be an independent vertical, borehole field to support all facilities and future considerations. The field may be supplemented by a smaller gas fired CHP plant.

Wind Energy

Based on the Campus location and proximity to the lake, there may be an opportunity to investigate and install stand-alone wind turbines on campus. This may be a viable option to support the West campus and also an extremely visible measure to promote Queen's commitment to sustainability within the University and local communities.

Large Solar Arrays

Large solar PV arrays can be installed on building facades, rooftops, parking structures or on the ground. Further study and cost analysis may be performed campus wide.

Deep Lake Water Cooling

Further study this potential and investigate depths/annual temperatures to support a district system. Even if low temperatures cannot be achieved to directly generate a chilled water system, with higher temperatures, the lake may still be used as a heat source/sink to create a district condenser water system. This may be used to support central chillers or heat pumps within each building. This would be similar in nature to the geothermal system.

Waste Energy

If there is a consistent volume of waste which can be sourced from the University and local community, there may be a potential to install a waster energy system. This could be a gasification process to generate fuel to serve central heating, CHP or fuel cell systems to support both campuses.

Additionally, the system could be used to fuel waste collection and campus vehicles to create a full cycle energy process. This would be a great promotional sustainable system for the University.

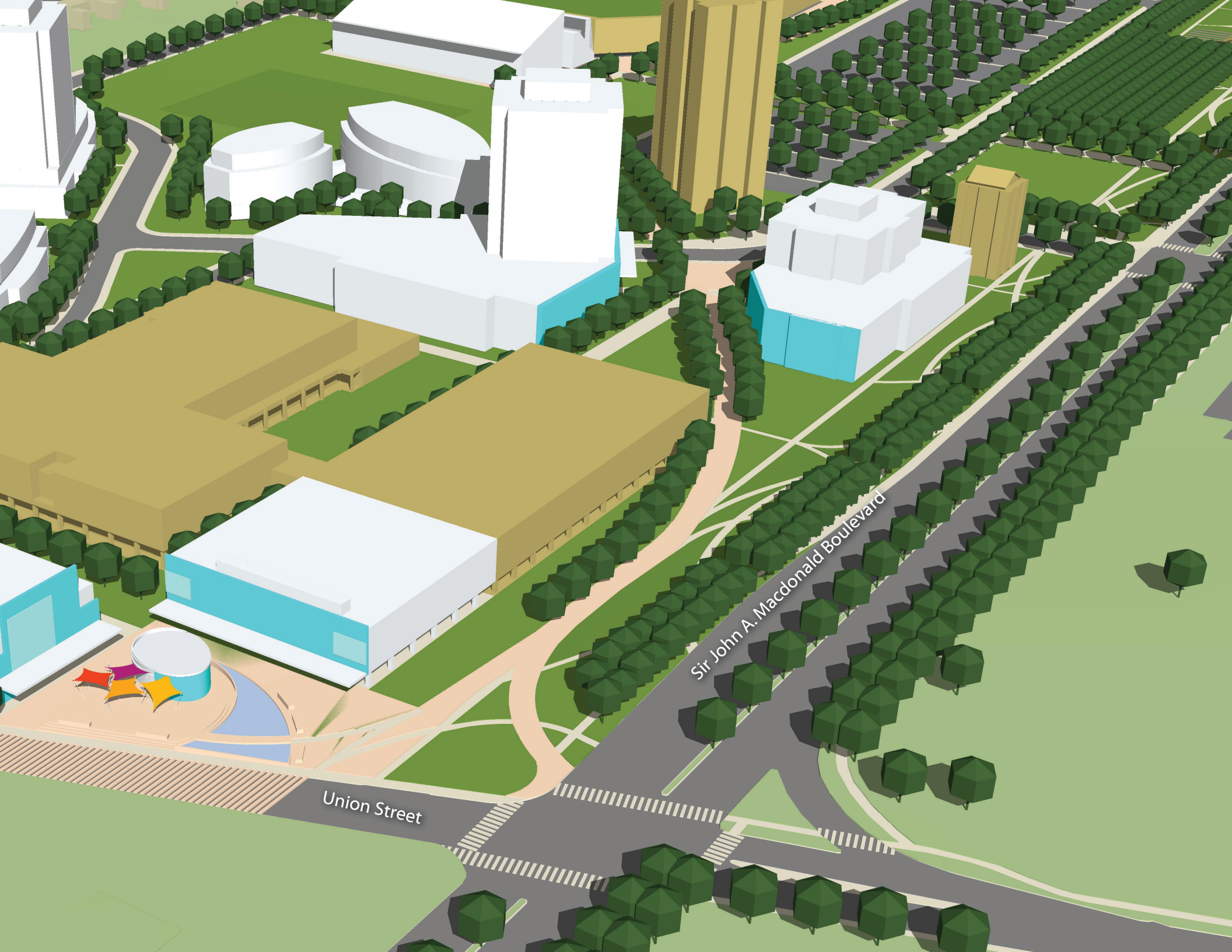
Each of these alternatives may be affordable through an energy partner and energy services agreement. If there is a business case, a third party investor could support the capital, operations and maintenance costs to create affordability and implement.

West Campus Master Plan

6

The original agrarian and penitentiary operations that once characterized the West Campus remain as the remnants of a rich and varied past. The West Campus Vision imagines a modern and attractive campus that pays tribute to this varied and rich history. The vision balances learning, working, living and recreation needs by creating a diverse network of flexible, comfortable, and inviting spaces with different characters and functions. Whereas the Main Campus Master Plan emphasizes the renewal of the much-loved historic campus, the West Campus Vision provides the basis for a long-term framework for creating a brand new place that borrows elements from what people love about Main Campus (such as social spaces, beautiful squares and plazas), but recreates them in a contemporary, context-specific manner.

Figure 6-1
West Campus Perspective


Sir John A. Macdonald Boulevard
Union Street

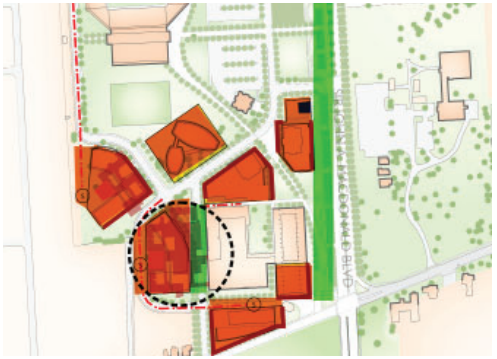
Building Community on West Campus

On West Campus there are very few social places. The ones that do exist are disconnected or hidden from common experience. Highlighting and expanding these places on West Campus will be a priority.

The following is a strategy to build campus places that aligns use, circulation, places, infrastructure and development to create a critical mass of people and a "sense of place". The strategy focuses on the south part of West Campus, recognizing the north portion of West Campus will remain as a valuable athletics precinct.

Phase 1
A new plaza will be a West Campus gathering space, framed by Duncan McArthur Hall, a new Green corridor, and Union Street.

Phase 2
Additional development north of Duncan McArthur Hall and west of West Campus Square frames new streets and corridors.



Phase 3
Jean Royce Hall is redeveloped. A new north-south road provides better pedestrian connections.

6.1 Land Use and Social Infrastructure

Envisioned as a 24-hour mixed-use campus, offering University uses as well as housing and services for nearby communities, West Campus will consist of a variety of uses and facility types.

Different types of uses and services including academic buildings, administrative offices, clinics, sports facilities, recreational facilities, and outdoor spaces will intermingle to provide amenity and vitality at all times of day, ultimately creating a more complete campus community than what currently exists.

A mix of uses is encouraged at West Campus, combining University and non-University uses. A loose land use structure is provided to guide decisions regarding what sort of uses should locate where. This structure considers existing uses, as well as proximity to adjacent residential neighborhoods, and certain uses best placed in areas in close proximity to transit, cycling and pedestrian routes.

West Campus has four different land use "clusters." The term clusters has been chosen rather than "category," to emphasize that the cluster characteristics do not mean single use areas, but rather a pattern where certain uses are better suited. The different clusters include the Mixed-Use Student Life Cluster, Residential Cluster Academic Core, and Athletics Cluster.

Mixed-Use Student Life Cluster

Centred around Union Street, key transit stops and the proposed West Campus Square, a future gathering space and the centerpiece of West Campus, (see Section 6.4.3) the mixed-use student life cluster will contain services and amenities for the West Campus community. This will include student offices, cafés, convenience stores, a Library that incorporates the enhancements recommended in LAMP, as well as multi-disciplinary study spaces.

The positioning of West Campus as a "health and wellness campus" is borne out of a wider University commitment to the well-being of the Queen's Community, as well as consultation throughout the Campus Master Plan study process.

A number of factors have influenced this decision:

- The existing presence of sports fields, and expansive open spaces, providing opportunity for a range of athletic activities.
- Students and Faculty of the Faculty of Education have noted the rise in prominence and value of outdoor teaching spaces and the need to promote health and wellness into educational environments;
- An expression of interest by the School of Nursing to potentially relocate to West Campus. The amount of space available would allow for expanded facilities and the opportunity to offer services to the Portsmouth and broader Kingston Communities.

Residential Clusters

There will be two residential clusters on West Campus, the first located generally where Jean Royce Hall is today, and the other south of the Student Life Centre, positioned on the former Prison for Women site. Both clusters will be the home for a concentration of residences, in addition to complementary small scale uses, such as cafeterias, cafés, and recreational uses. The residential cluster south of Union Street is considered a particularly appropriate location for non-University housing due to its proximity to Portsmouth and the waterfront, though market housing may also be located in the Student Life cluster.

Academic Core

The academic core will be the primary location for academic and clinical buildings on campus, though these uses may also be interspersed within other clusters. While any faculty or department may be located here, an appropriate faculty would be the School of Nursing due to the need for expanded facilities, and the potential to offer services to the Kingston Community, keeping with the mixed-use vision for West Campus .

Athletics Cluster

The athletics cluster currently contains space-intensive uses such as Richardson Stadium, practice fields, surface parking lots, and the Coastal Engineering Lab. This area will continue to be a location for space intensive uses (e.g. an arena and/or stadium). With health and wellness identified as one of the characteristics West Campus may have, as well as its existing role as the home to the Faculty of Education, there is a potential to diversify the types of outdoor and recreational uses to complement future programming on the campus. These might include outdoor teaching spaces, naturalized grounds, or a parcourse.

Recommendations

1. The “clusters” indicated on Figure 6-2 should generally be regarded as an organizing structure for West Campus.

2. Academic uses should be located in proximity to one another and to student life uses, to ensure short distance between classes and study facilities.

3. Uses that support the “health and wellness” character of West Campus, such as clinics, health facilities, or recreational uses (such as an arena or stadium), should generally be directed to West Campus.

4. Surface parking is permitted as an interim use for all future development sites. The introduction of any new surface parking should comply with the design direction provided in Section 7.1.7.

- Student Life Spaces
- Corridors
- Academic
- Residences
- Administration / Utility

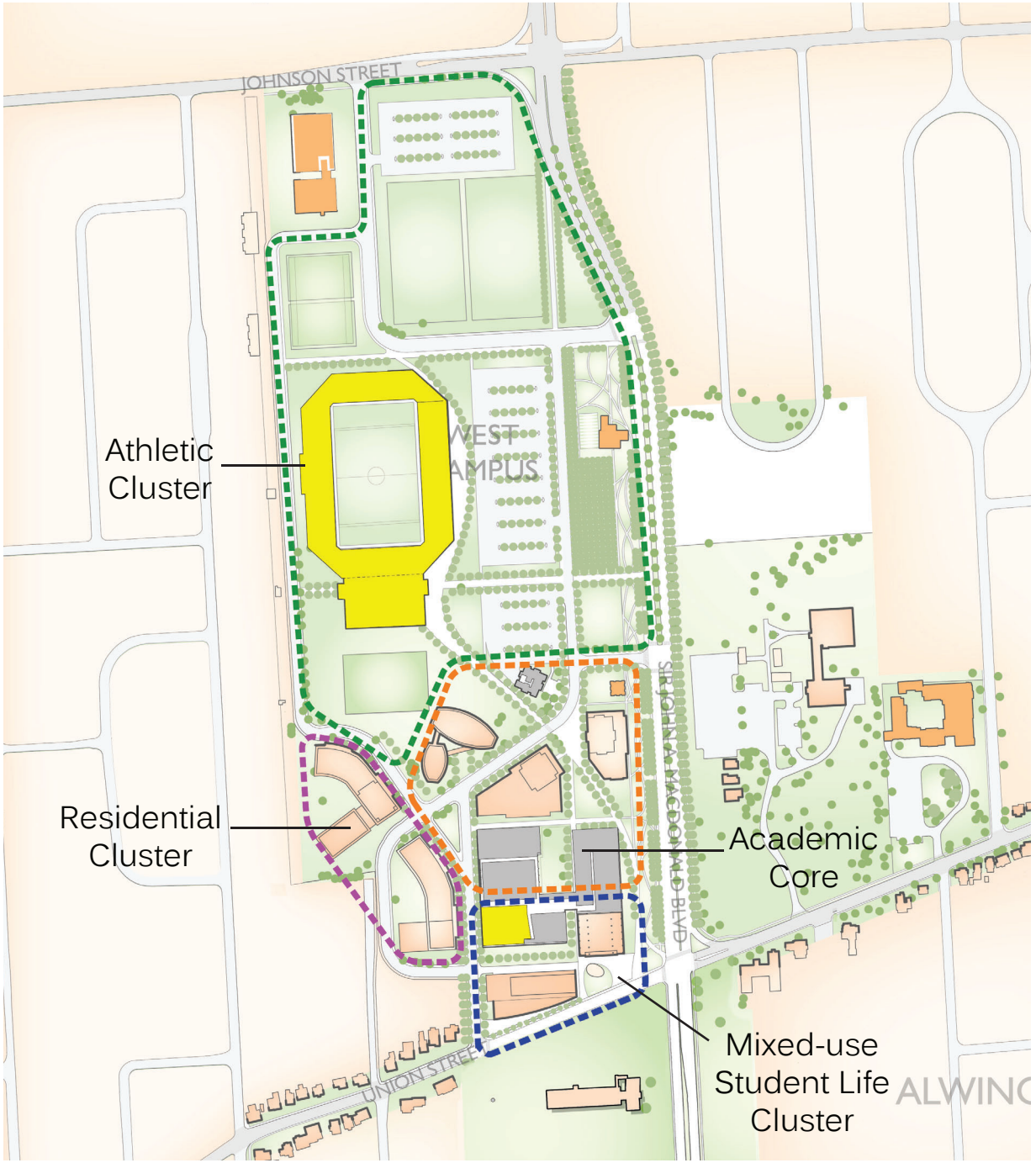


Figure 6-2
West Campus
Social Infrastructure

6.2 Heritage

While West Campus isn't defined by its historic buildings in the same way as Main Campus, it still includes a modest number of historically significant buildings, including the Water Tower, originally part of the Kingston Penitentiary Farm.

As with Main Campus, these buildings will be protected due to their historic significance. Unlike the heritage assets of Main Campus that are predominantly institutional buildings that were also part of Queen's, the structures on West Campus provide linkages to Kingston's history as one of the locations of Upper Canada's first correctional facilities and council seat. It also sits in proximity to many historic places including the Kingston Penitentiary and Museum, the former Prison for Women, historic Portsmouth, and Kingston's first City Hall. These narratives are something that Queen's is committed to continuing.

Recommendations

1. Buildings coloured in blue on Figure 6-3 are considered historically significant and will be retained. Internal alteration of these buildings is permitted, however, a facility-specific historic assessment will be required before any reconstruction is permitted.

2. Buildings coloured in blue on Figure 6-3 are permitted for incorporation into new development, so long as their prominence in relation to the street is not compromised. The massing and design of any additions should give prominence to the historic structure. While any addition should complement the historic structure, new components of these buildings should be contemporary in design.

Historic
- to be protected

Redevelopment Permitted
- house-form character to be respected

Existing Buildings

Proposed Buildings

Campus Boundary

Figure 6-3
West Campus Heritage

6.3 Renewal and Development Sites

West Campus contains a number of potential development sites for new, larger scale uses. The development sites are positioned around the future expanded mobility network.

The development opportunities map identifies sites appropriate for redevelopment. Whereas much of the focus for new development on Main Campus is respecting historic character, on West Campus, the priority is to create a compact, pedestrian friendly building pattern. Over the long term, as West Campus develops and begins to house buildings of more intensive use, Duncan McArthur Hall may be expanded or renovated for incorporation into a more contemporary building.

Two types of sites comprise the Renewal and Development Sites on West Campus. As further described in Chapter 2, the development sites on West Campus include vacant or undeveloped sites and certain parking lots. The surface parking in the north part of West Campus will be maintained and expanded to account for relocated surface parking from Main Campus.

Although there are a number of available large development sites on West Campus, near-term growth will be focused on the remaining large development sites with fewer logistical constraints on Main Campus. Identification of the long-term development opportunities on West Campus provides structure and clarity for future campus growth within and beyond the 15-year time frame of this Plan. The near-term plan is provided in more detail in Chapter 8 of this Plan.

The Renewal and Development Sites are subject to the same considerations and conditions as indicated on the Main Campus Plan. These are:

- The identification of **key building frontages** and intersections, to which entrance ways should be oriented and built to.
- **Historic buildings** (or portions of building) to be protected, either through incorporation into new development or facility renewal.
- **Required courtyard spaces** to be included in a building's design.
- Servicing access routes and building service zones.

For a fuller discussion of the intent behind these considerations, please see Section 5.3 of this document. A detailed discussion of these considerations at the precinct scale can be found in Part 2 of this document.

Recommendations

1. The development sites indicated in Figure 6-4 should guide the selection of sites for new development on West Campus.

2. New development will adhere to the considerations and conditions of development as indicated on Figure 6-4.

- Development Site
- Key Building Frontage
- Demolition - Due to Poor Facility Condition
- Demolition - Site Under Utilization
- Historic
- * Courtyard Space Required
- Proposed Service / Access Route
- (S) Proposed Service / Access Zone

Development Sites

A Jean Royce North Site
B Jean Royce South Site
C South Practice Field Site
D Refrigeration Plant Site
E McArthur Hall Extension
F Water Tower Site
G Union and Hargreaves Way Site
H Deleted
I Deleted
J Coastal Engineering and West Campus Storage Site

Figure 6-4
West Campus Renewal and Development

6.4 Open Space Network

There is substantial opportunity and need to improve the quality of open space on West Campus. The Open Space Network for West Campus consists primarily of proposed new spaces, and is organized by four landscape types, each with their own role and function.

Once complete, this network will form a varied open space network that greatly improves West Campus' sense of place and provides new opportunities for the Queen's and Kingston communities to enjoy.

The new open spaces provided in this section will be designed and implemented in conjunction with new development, as indicated as Enabling or Coordinated Projects in Part 2 of this Plan.

Recommendations

1. A Landscape Master Plan for West Campus should be developed as a comprehensive guide to landscape investment based on the landscape projects identified in this document. Landscape projects will be implemented according to University objectives and funding opportunities.

2. The open space projects described in this section will be designed and implemented in conjunction with new development, indicated as Enabling or Coordinated Projects in Part 2 of this Plan.

3. As a campus with a health and wellness focus, new open spaces on West Campus should consider features that promote physical activity or mental well-being, such as outdoor fitness equipment, a parcourse, walking or running trails, reflexology footpaths, or shaded and protected areas with flexible seating for outdoor activities and/or classes.

4. General Open Space Recommendations 3 - 8 of Section 5.4 regarding planting selections, surface treatments and maintenance of open spaces also apply to West Campus and should be adhered to in the planning for any new landscape project.

Figure 6-5
West Campus Open Space Network

Signature Landscape

Formal Linear Landscapes

New Plazas, Courtyards and Small Greens

Gateways

Figure 6-6
Signature Landscapes

6.4.1 Signature Landscape

West Campus is in need of the same high quality open spaces that so many people cherish on Main Campus. To enhance the quality of place on West Campus is the proposition of a legacy signature landscape project — West Campus Green. This landscape, detailed on the following pages, will be a defining element of West Campus.

Landscape Projects:

A West Campus Green (L9)

University of Washington

Rice University

Landscape Project L9

West Campus Green

West Campus Green will be a large scale linear park adjacent to Sir John A. Macdonald Boulevard. It will be experienced as a singular linear park, legible through common design elements, consisting of many distinct character areas. It will be a defining place on West Campus, as well as a significant gateway feature.

A continuous double row of trees will line Sir John A. Macdonald Boulevard, and will also frame the different components of the park, each with a distinct identity. These different components or zones will vary in active and passive uses such as formal gardens, parkettes, plazas, pavilions and small informal playing fields. Integrated with pedestrian, jogging and cycling paths, most notably Ceremonial Trail, (see Section 6.4.2), the West Campus Green will be both a destination in itself as well as a carrier of people to and from West Campus.

Recommendations

1. A double row of trees should be planted along the west side of Sir John A. Macdonald Boulevard with the dual purpose of buffering West Campus Green and defining Sir John A. Macdonald Boulevard.

2. West Campus Green should consist of a variety of character areas with distinctly different settings and uses. The themes, design, and programming of different character areas should honour past uses and reflect current needs. Such character areas may include spaces for active recreation (small playing fields), educational components (native species plantings), working landscapes, including agricultural demonstration areas and knowledge gardens

3. Tree plantings of the same species should act as a consistent design element unifying the different character areas.

4. The design of West Campus Green should be integrated with protected and comfortable pedestrian and cycling paths. Where these paths intercept with vehicle routes, formalized crossings or design treatments that prioritize pedestrians should be installed.

5. Buildings may be situated beyond a 30.0 meter setback from the Sir John A. Macdonald Boulevard right-of-way.

Figure 6-7
West Campus Green

Figure 6-8
Existing Condition

Figure 6-9
Proposed West Campus Green

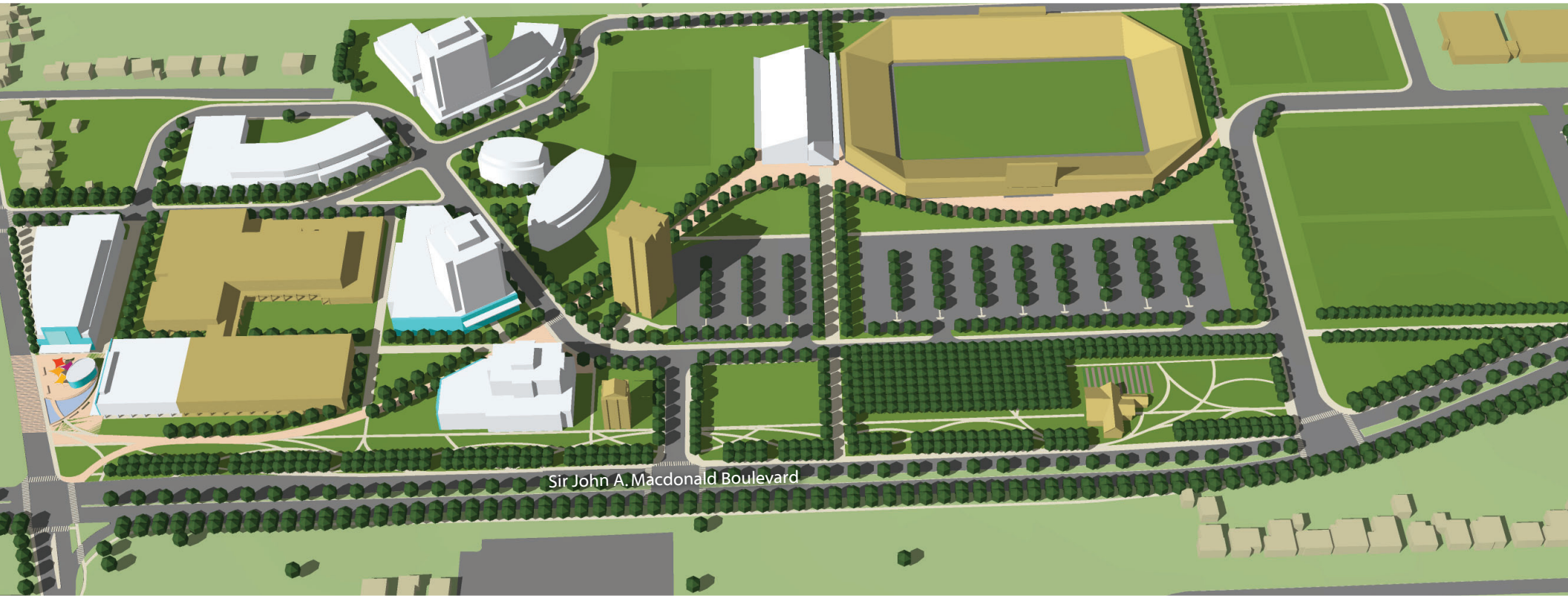


Figure 6-10
Formal Linear Landscapes

6.4.2 Formal Linear Landscapes

The landscape projects proposed for West Campus provide the opportunity to think holistically regarding the design of the open space and movement network. Formal Linear Landscapes consists of Walks (pedestrian routes integrated with landscaping and open space) as well as streetscapes.

As illustrated in Figure 6-10, the Linear Greens on West Campus consist of the following:

Landscape Projects:

A West Campus Walk (L10)

B Ceremonial Trail (L11)

Other Projects for Consideration:

C Union Street Improvements

D Entry Allée and Other Walks

The general recommendations for Formal Linear Landscapes, provided on Page 68 of the Main Campus Master Plan also apply to the Planning and design of Formal Linear Landscapes on West Campus.

Cornell University

University of Pennsylvania

Landscape Project L10

West Campus Walk

Running parallel to Sir John A. Macdonald Boulevard, West Campus Walk will be the primary north-south direct pedestrian connection that carries pedestrians through the academic core of West Campus. If Duncan McArthur Hall is renewed, a portion of it may be a covered walkway through what is now the wing that connects it western and eastern halls .

Recommendations

1. The University should prepare a design plan for the West Campus Walk, considering a consistent paving treatment and landscape plan.

2. Ensure new development on West Campus reserves the right-of-way for the installation of West Campus Walk including the future development plans for the former Prison for Women site and the renewal of Duncan McArthur Hall.

3. Reconstruct the wing that connects the western and eastern portion of Duncan McArthur Hall into a covered walkway.

4. Special consideration should be given for the interface with squares and parks that intercept the walk. These spaces should provide visual and physical relief, as places to sit and rest, but should not disrupt with route's continuity. A consistent trail will be achieved through wayfinding, pavement treatments and architectural features such as archways.

Figure 6-11
West Campus Walk Perspective

Figure 6-12
Existing Condition

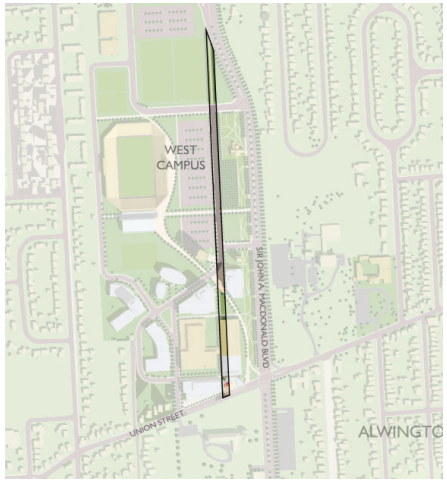
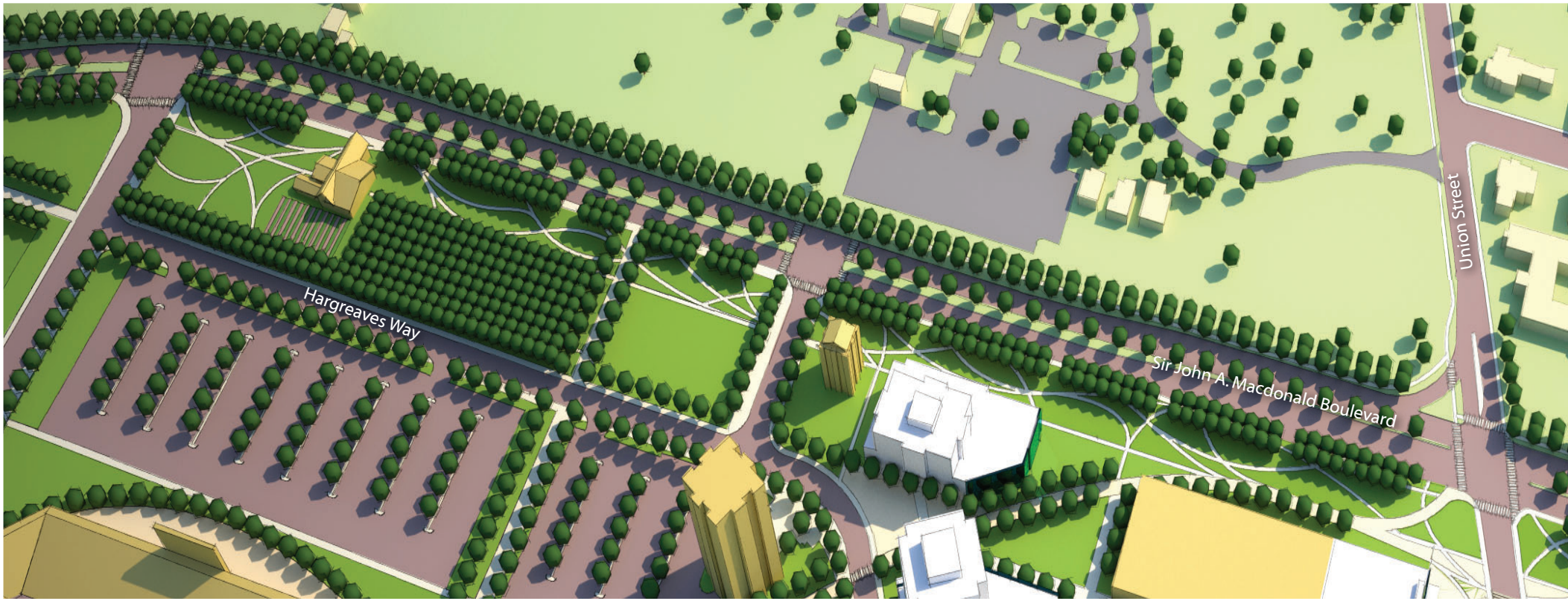


Figure 6-13
Proposed West Campus Walk



Landscape Project L11

Ceremonial Trail

The Ceremonial Walk celebrates the traditional procession from Main Campus to Richardson Memorial Stadium. The Ceremonial Walk will be a special paved route that diagonally bisects the campus, beginning at the southern foot of West Campus Green (see Section 6.4.1) and terminating at the north end of the Stadium, integrated with Athlete's Plaza (see Section 6.4.3). Its diagonal, meandering alignment stands as a contrast to the more linear designs that defines most of the other landscapes on West Campus. The Ceremonial Walk will be lined with trees to help define the walk and increase legibility.

Figure 6-15
Existing Condition

Figure 6-16
Proposed Ceremonial Trail

Recommendations

1. The University should prepare a design plan for the Ceremonial Trail, considering a consistent paving treatment and landscape plan.

2. In the design of Ceremonial Trail, consider methods to tell the history of Queen's and its traditions, including public art, signage or enhanced pavement design.

▲ Figure 6-14
West Campus Walk Perspective

Other Projects for Consideration

There are a number of other linear landscapes that have been positioned to terminate at key landmarks and destination on West Campus. Together they create a fine-grained pedestrian network, providing multiple opportunities to navigate the future expanded West Campus.

Entry Allée

Entry Allée is the most westerly north-south walk, providing access through residences and academic buildings.

Union Streetscape Improvements

Improvements to Union Street should be co-ordinated with the City and brought forward as part of the installation of West Campus Square. Any improvements should consider special design for the portion that runs through West Campus and should include a wide pedestrian right-of-way, street trees and other plantings, and opportunities for street furniture.

Figure 6-17
Plazas, Courtyards, and Small Greens

6.4.3 Plazas, Courtyards and Small Greens

A variety of settings have been envisioned for West Campus to support life outside of the classroom or office. Plazas provide celebratory settings for gatherings and festivities, whereas courtyards and other small greens provide quieter settings for day-to-day activities.

As illustrated in Figure 6-17 the Plazas, Courtyards, and Small Greens consist of the following:

Landscape Projects:

A West Campus Square (L12)
B Athlete's Plaza (L13)
C Mascot Plaza (L14)

The general recommendations for Plazas, Courtyards, and Small Greens, provided in Section 5.4.3 of the Main Campus Master Plan also apply to the planning and design of Formal Linear Landscapes on West Campus.

Ann Arbor

UCDS

Landscape Project L12

West Campus Square

West Campus Square will be a new public plaza framed by Duncan McArthur Hall, a new Green corridor, and Union Street. It will be the centre of activity at West Campus as a meeting place, transit hub, access point to the Athletics Cluster, and as an interface with the broader Kingston community. The siting of new buildings around West Campus Square will define the square and provide a sense of enclosure to the space.

A central pavilion and water feature will provide a landmark element framing this important gateway into West Campus. West Campus Square will also provide amenities for the shuttle that connects to Main Campus.

Recommendations

1. A landscape and renewal plan should be developed to address the recommendations described herein.

2. A uniform design scheme should be installed around the square as well as the streetscape itself. This may be achieved through special pavement treatments, uniform landscaping, or common street furniture.

3. West Campus Square may contain a central pavilion offering services for students, faculty, staff and Kingston community members such as a cafe.

4. A high quality public art or water feature should be incorporated in the West Campus Square design. Preference should be made to art that celebrates the University's history, culture, and heritage, or a topic complementary to West Campus' health and wellness focus..

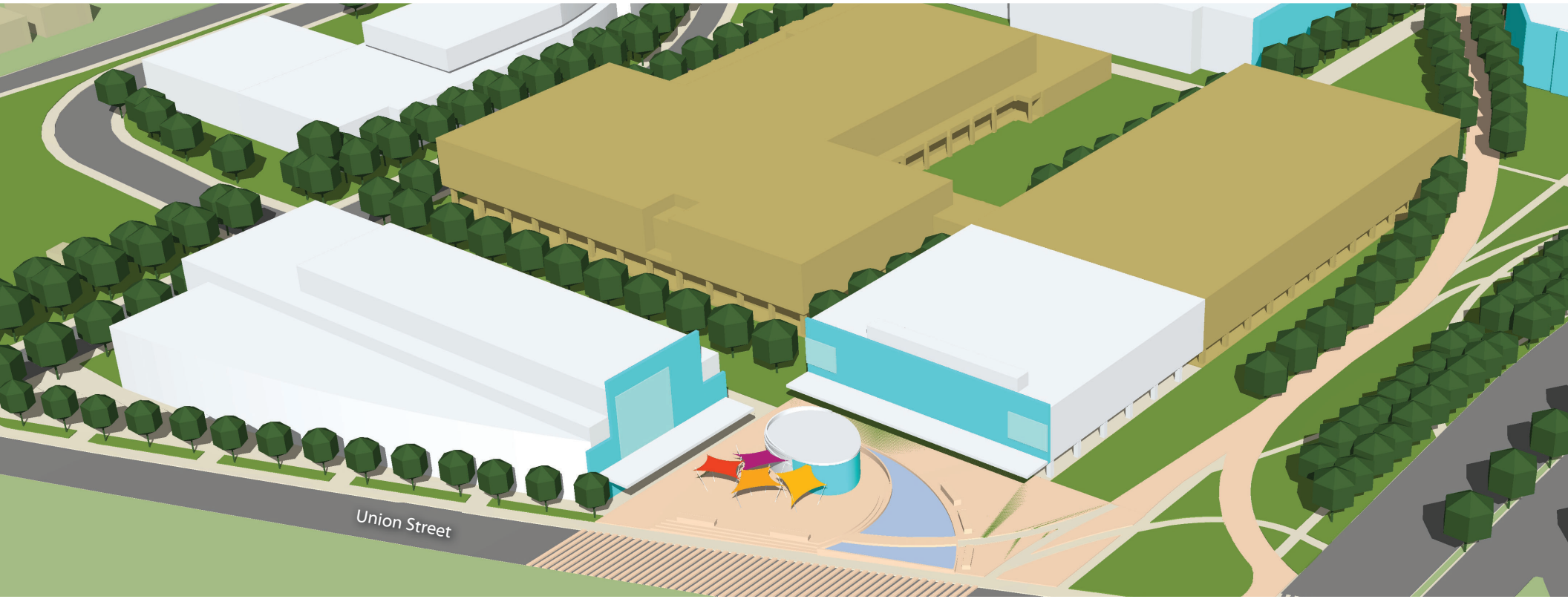
5. Weather protection, such as bus shelters or tree plantings should be integrated with transit waiting areas.

6. A variety of seating choices should be offered throughout West Campus Square, with ample seating opportunities (either in the form of benches or integrated into planters or public art) near transit waiting areas.

Figure 6-18
West Campus Square Perspective

Figure 6-19
Existing Condition

Figure 6-20
Proposed West Campus Square



Landscape Project L13

Athlete's Plaza

Athlete's Plaza, located adjacent to the expanded Richardson Stadium will be a meeting place closely associated with sporting events. It should contain street furniture that supports the activities associated with sporting events, such as picnic tables and seating. Its design should consider its integration with the Ceremonial Trail, and include wayfinding measures such as common pavement treatment or signage.

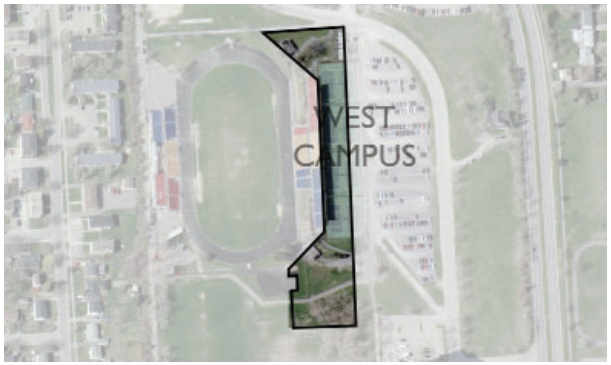


Figure 6-21
Existing Condition

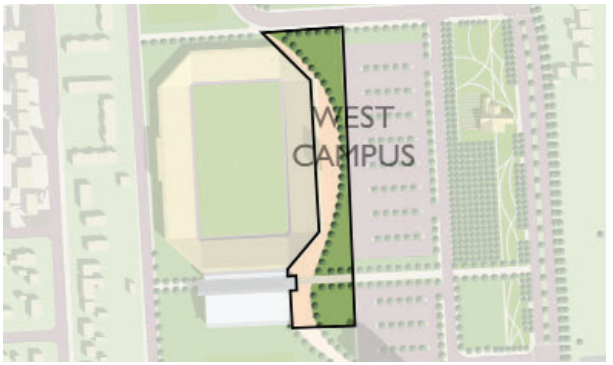


Figure 6-22
Proposed Mascot Plaza

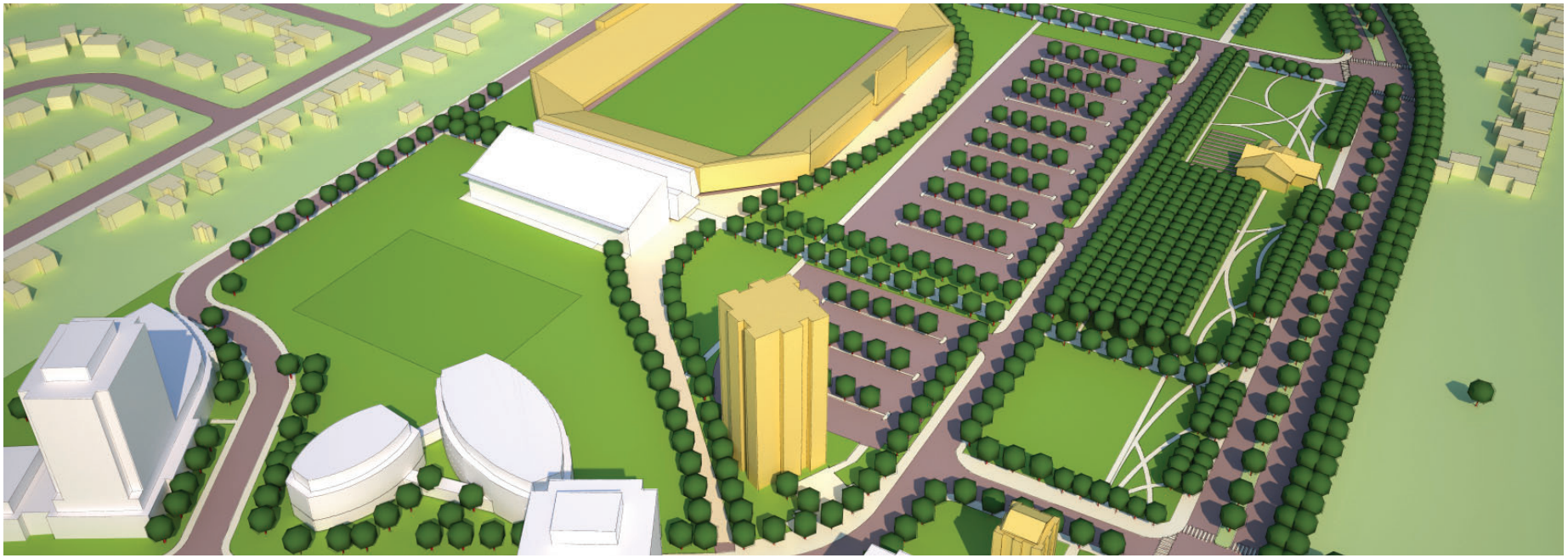


Figure 6-23
Mascot Plaza Perspective

Landscape Project L14

Mascot Plaza

Located amongst residences and academic buildings, Mascot Plaza will be the backyard for West Campus students and should be designed as an enclosed, comfortable flexible space that can be used for many purposes.

Figure 6-24
Existing Condition

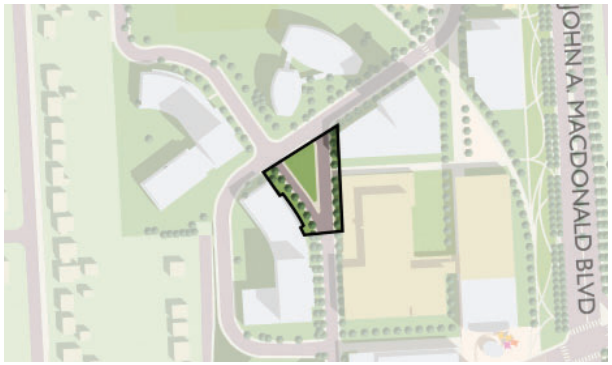


Figure 6-25
Proposed Mascot Plaza

Figure 6-26
Mascot Plaza Perspective

Figure 6-27
Gateways

6.4.4 Gateways

For many first time visitors to Kingston, West Campus is the first encounter with the Queen's Campus. For that reason, enhancing the gateways on West Campus – the places within the larger open space network that mark the transition from City to the campus – should be considered of particular importance.

The plan on the opposite page illustrates two primary gateways, to be the sites of larger scale improvements such as public art, signage and special landscaping, and a number of secondary gateways, which should receive enhanced landscaping attention, but will not provide the same grand sense of arrival.

Sir John A. Macdonald Blvd. / Johnson Street Gateway (G6)

This intersection is the first encounter with Queen's from the Sir John A. Macdonald Boulevard Highway 401 Exit and North Kingston. As this corner will remain open space, the gateway's elements will be achieved through special landscaping, as well as the views of new architectural features such as the new stadium. The University should revisit the existing sign at this location and incorporate a gateway element and better pedestrian access into the streetscape design of Sir John A. Macdonald Boulevard as well as the West Campus Green

Sir John A. Macdonald Blvd. / Coach's Lane Gateway (G7)

This will be a new gateway that can be implemented as part of the installation of Coach's Lane (detailed in Section 6.5.2). It is the first access point to West Campus when traveling south on Sir John A. Macdonald Boulevard and provides access to the northern surface parking lots.

Sir John A. Macdonald Blvd. / Union Street Gateway (G8)

This is the primary entryway to West Campus from Main Campus. West Campus Square will be a gateway in the form of a great public space, and its role as a gateway should be considered in its design.

Union Street / Hargreaves Way Gateway (G10)

The Union Street and Hargreaves Way Gateway signals entry from Kingston's west end. While secondary in importance to the Sir John A. Macdonald Boulevard and Union Street Gateway, it will provide opportunity to implement entry features such as special landscaping or signage as part of its redesign. Improvements here should be complementary and co-ordinated with any improvements to Union Street.

6.4.5 Summary of West Campus Landscape Projects

The plan on the opposite page compiles the array of landscape projects described in this section. The new landscape projects in this project will be incorporated into new development projects or infrastructure renewal, or may simply evolve incrementally over time.

Their integration with new development, as well as other design and implementation considerations, are described in further detail in Part 2 of this Plan.

Signature Landscapes

L9 West Campus Green

Formal Linear Landscapes

L10 West Campus Walk

L11 Ceremonial Trail

Plazas, Courtyards and Small Greens

L12 West Campus Square

L13 Athlete's Plaza

L14 Mascot Square

Gateways

G6 Sir John A. Macdonald Blvd. / Johnston Street Gateway

G7 Sir John A. Macdonald Blvd. / Coach's Lane Gateway

G8 Sir John A. Macdonald Blvd. / Union Street Gateway

G10 Union Street / Hargreaves Way Gateway

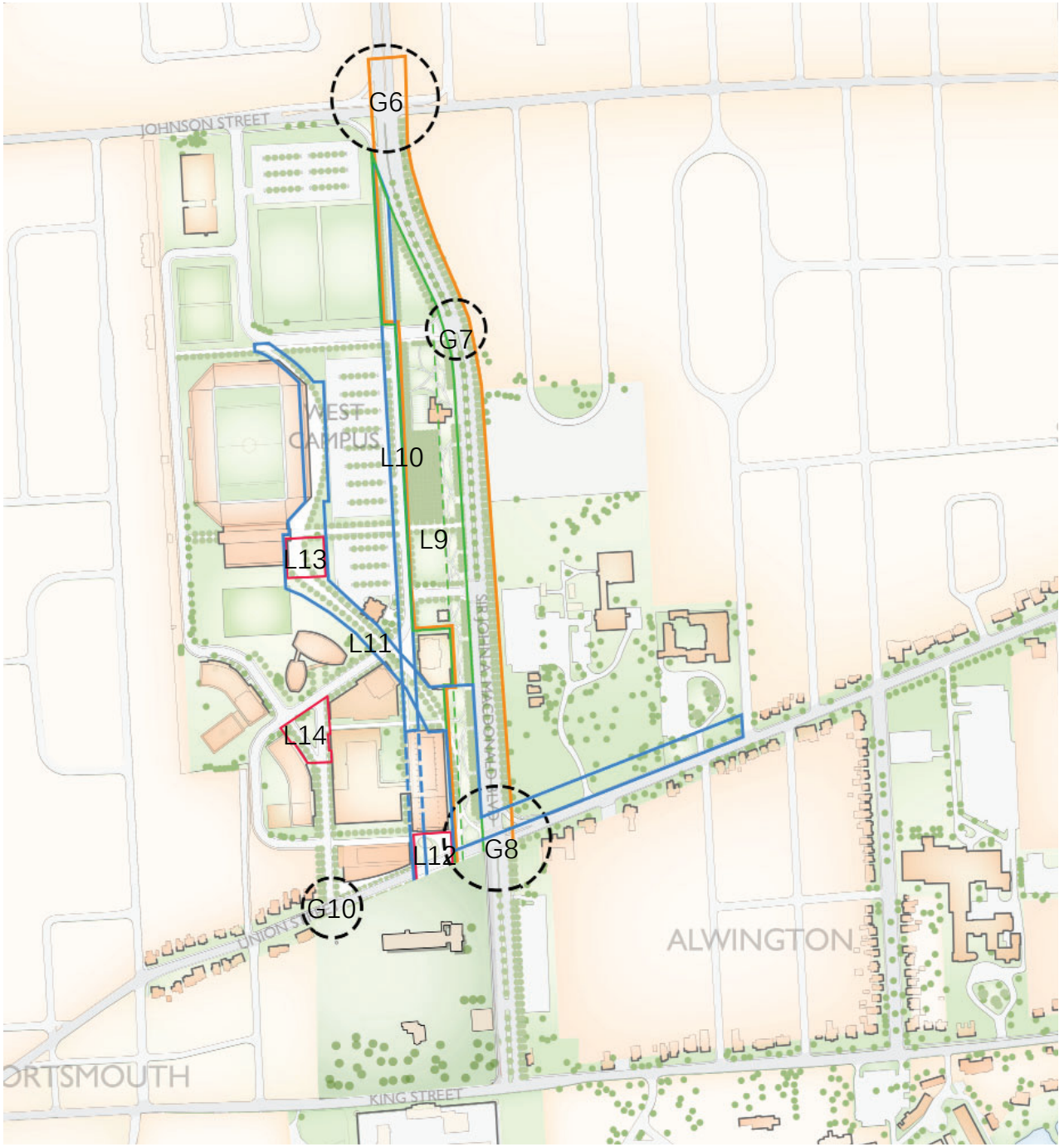


Figure 6-28

West Campus Landscape Projects Summary

6.5 Movement

Great University campuses are highly walkable places, balancing all modes of transportation. While the movement network today on West Campus is sufficient to serve the limited places that exist today, as it develops further, it will be imperative that the street and pathway network is expanded to create more movement options for pedestrians and cyclists, and ensure good vehicular flow.

The proposed movement networks introduce new streets, laneways, pedestrian, jogging, and cycling routes to support West Campus' future role as a compact, 24 hour campus. A particular priority is to better connect the northern and southern portions of campus for pedestrians, cyclists, transit, and private vehicles.

6.5.1 Pedestrian Network

An expanded pedestrian network on West Campus will consist of a number of new walks weaving between new campus buildings as well as the addition of sidewalks to existing campus streets. Together, the pedestrian network will provide a fine-grained network of paths similar in scale as Main Campus forming a safe and thorough system for getting around campus. The crosswalk enhancements described in 6.6.2 will ensure the vehicle and pedestrian networks are carefully integrated. As with Main Campus, newer, larger buildings will be designed as an extension of the exterior fine-grained pedestrian network, providing internal hallways that align with the pedestrian network, and design features that facilitate clear through movement.

Individual design considerations and individually specific characteristics of new walks and pedestrian paths illustration on Figure 6-29 are described in detail in the Formal Linear Landscapes Section of the West Campus Master Plan (see Section 6.4.2). The general recommendations regarding the design and considerations of formal linear landscapes, as described in Section 5.4.3 also apply to the design of all new pathways. The installation of these walks are considered landscape projects, and should be implemented with adjacent new development or renewal projects.

Recommendations

1. The enhancement of existing sidewalks and paths on West Campus should be considered a priority in order to ensure a safe, walkable, and accessible environment. Enhancements should aim to create protected and inviting routes. Design considerations should include:
   - Continuous, identifiable paving
   - Framing and protective elements such as trees or planting
   - The incorporation of street furniture such as benches to provide places to rest. These should be located on either side of the path but should not obstruct the pedestrian right-of-way
   - Regard for Design for Crime Prevention through Environmental Design principles

2. Pedestrian activity should remain at grade and be designed in accordance with Queen's Accessibility Guidelines to accommodate those with mobility-related disabilities.

3. Walks and Pedestrian Pathways should be aligned with one another to ensure a continuous and co-ordinated network. Any new walk or re-alignment of an existing walk should be designed to join with other components of the pedestrian network.

4. To provide safe, well-lit routes, install pedestrian-scaled lighting along pedestrian routes either as stand-alone structures or as part of adjacent buildings.

5. When designing new buildings, ensure the placements of entries and exits align with existing pedestrian routes as illustrated on Figure 6-29. Entry ways should utilize transparent materials to provide a sense of porosity to the new building, indicating a pedestrian through-way.

6. As West Campus intensifies, preserve a right-of-way for a potential future connection to Yonge Street. This connection will provide access from the West and support pedestrian and cycling activity.

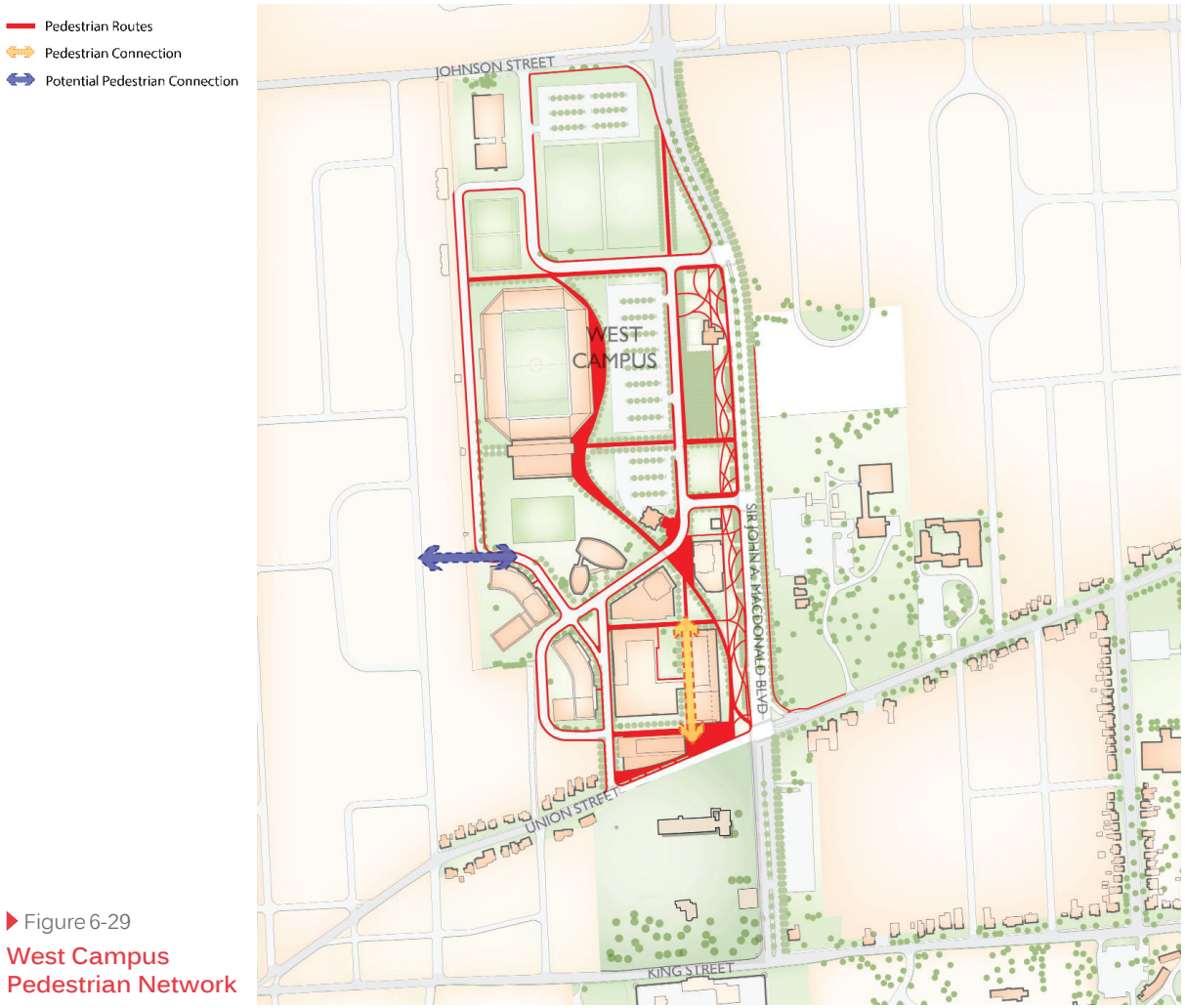


Figure 6-29
West Campus Pedestrian Network

6.5.2 Street Network

An expanded street network will support the new places and destinations on West Campus and provide more movement options through West Campus. A number of expansions to the street network will be realized over time as West Campus evolves. As with Main Campus, streets on West Campus are also be part of the open space and pedestrian networks, and should incorporate safe and attractive design consisting of continuous sidewalks and accommodating different modes of travel.

A re-alignment of Hargreaves Way at the northern edge will allow for an increase in surface parking to accommodate relocated parking from Main Campus. As more surface parking is located in the northern portion of West Campus, additional minor streets will connect with Sir John A. Macdonald Boulevard to provide access points. In addition, a number of service lanes will be extended and redesigned as streets with sidewalks and will provide more vehicular routes throughout campus, supporting not only private vehicles but also the proposed campus circulator. The relocation of parking and the campus circulator project are described in detail in Section 4.2.

Expansion of the Street Network

Figure 6-30 indicates the future street network of West Campus. The street reconfigurations and extensions will be realized in conjunction with new development and are therefore indicated as infrastructure projects. The following is a list of these projects and the intent behind them:

- A new north-south street will be formed by the extension of the existing service lane between Jean Royce Hall and Duncan McArthur Hall to meet Hargreaves Way.

- The extension of Stadium Lane south to meet with the new north-south street previously discussed will create more interconnection on campus.

- A new east-west Connection extending from Hargreaves Way to Sir John A. Macdonald Boulevard (north to the existing access street) will be a necessary additional access point to the surface parking on West Campus. As new athletics facilities are built here, this street will provide additional access during games.

- The current vacant land parcel where Campus Lane angles northwest provides an opportunity to link with Yonge Street in the Portsmouth neighbourhood to the west of West Campus. As a mixed-use campus containing non-University uses, this will be a key infrastructure move to increase connectivity with adjacent neighbourhoods.

New Intersections and Intersection Improvements

A number of intersection and crosswalk improvements will provide pedestrian safety and priority. Figure 6-30 indicates new intersections (located where new east-west streets connect with Sir John A. Macdonald Boulevard) as well as intersections to be improved.

For existing and new intersections that intersect with Sir John A. Macdonald Boulevard, a reconfiguring of Sir John A. Macdonald Boulevard's median to allow left turns in and out of the new streets is proposed. Allowing full access will be necessary as the intensity of uses on West Campus increases.

Other crosswalks to be improved are indicated where pedestrian paths intersect with roads. Clearer priority for the pedestrian should be reinforced here through special paving, painted lines, or signage. These principles should also be assigned to new intersections that are introduced with the installation of new pedestrian paths as described in Section 6.5.2.

Recommendations

1. Prioritize pedestrian, bicycle and transit activity in the improvement and creation of all West Campus streets and advocate for these modes of transportation in any projects involving city streets.

2. To achieve better access to West Campus, advocate to the City of Kingston for the removal of the centre median on Sir John A. Macdonald Boulevard where new intersection and crosswalks improvements are indicated on Figure 6-30.

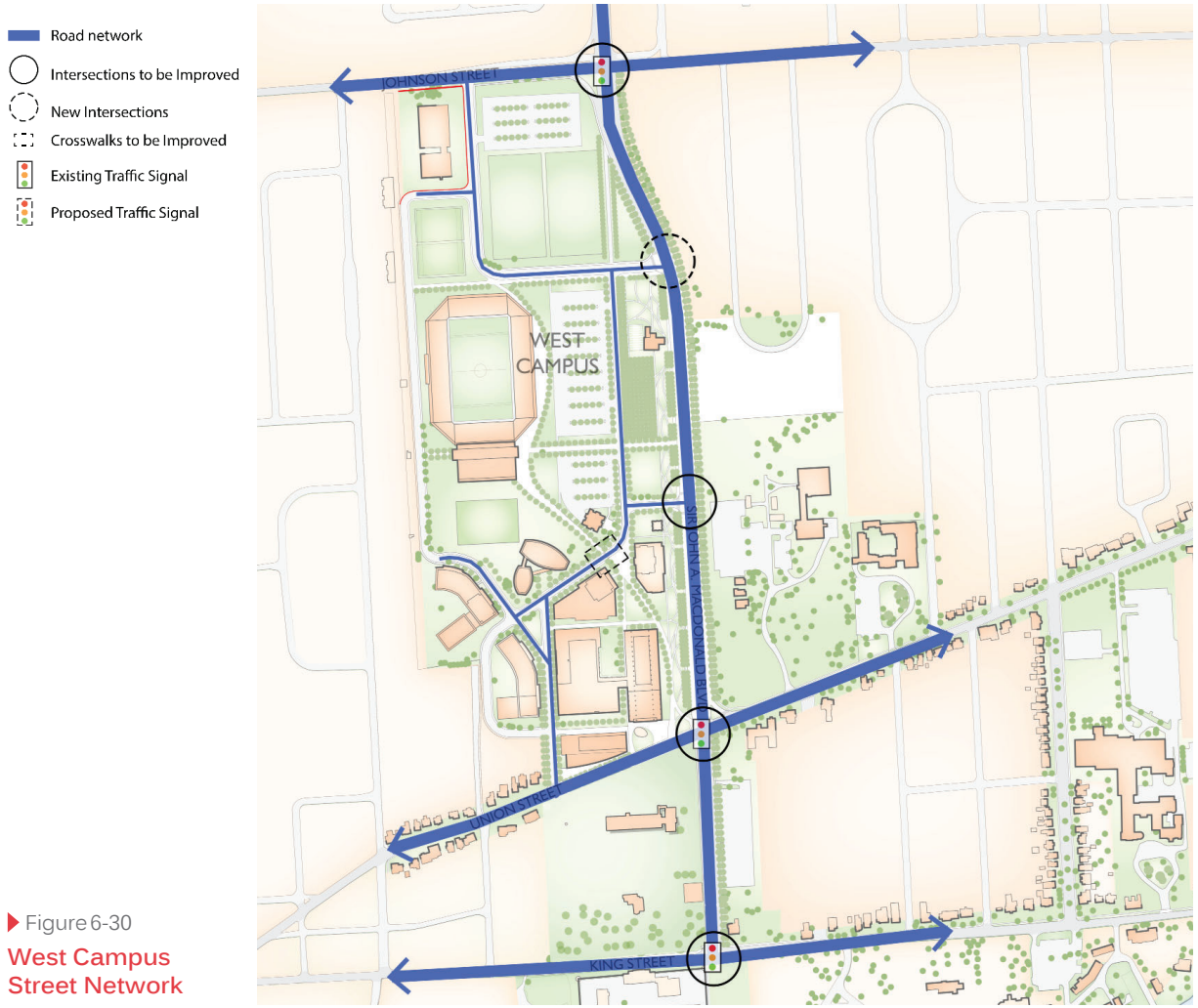


Figure 6-30
West Campus Street Network

6.5.3 Parking

West Campus currently contains surface parking lots that provide day parking for Queen's and Kingston General Hospital staff as well as parking for athletic events. The parking strategy provided in Chapter 4 recommends that as parking is displaced from Main Campus (as a result of new development) replacement parking should be added to the existing supply on West Campus, contiguous to the existing lots. The increase in parking should be supported by new access streets to Sir John A. Macdonald Boulevard, illustrated in Section 6.5.2.

New underground or structured parking is not anticipated on West Campus, due to high construction costs and the large supply of land available for surface parking. However, opportunities to share structured parking should be explored with any private development partnerships that occur south of Union Street.

In the near term, future development sites on West Campus may be used as surface parking to provide spaces closer to the location of activities at the south end of the campus. Any new surface parking should receive enhanced landscape treatment (e.g. landscaped pedestrian paths, increased tree cover, pedestrian-scale lighting, smaller parking modules) to better reflect the quality of campus and ensure a safe pedestrian experience.

Recommendations

1. Any new surface parking should comply with the design direction provided in Section 7.1.7 and receive enhanced landscape treatment (e.g. landscaped pedestrian paths, increased tree cover, pedestrian-scale lighting, smaller parking modules) to better reflect the quality of campus and ensure a safe pedestrian experience.

6.5.4 Cycling Network

As a campus with a health and wellness focus, the infrastructure and facilities for cyclists on West Campus must be extensive and well-considered. It may also be an appropriate location for a dedicated space to advocate cycling or provide repair services.

The cycling network on West Campus consists of:

- The existing on-street cycling route on Union Street;
- One Proposed Cycling Trail that will be incorporated into the design of the West Campus Green;
- Design enhancements to existing streets that indicate the right-of-ways for cyclists through various forms, whether it be painted lanes or sharrows.

Figure 6-31 illustrates the location of these cycling network components, as well as Potential Bike Parking Areas, and Enhanced Bicycle Parking Facilities. As described in detail in Section 5.5.4, Potential Bike Parking areas indicate roadside locations for bike racks, posts, or rings and Enhanced Bicycle Parking Facilities refers to higher-security bicycle parking such as bike lockers or bike cages. With many new development sites located on West Campus, there is a great opportunity to incorporate these facilities into new facilities.

As a key entryway to West Campus from Union Street and a Student Life Cluster, West Campus Square should contain ample bicycle parking. However, bicycle parking structures should be located at the periphery of the square, so it doesn't obstruct views or pedestrian movement patterns.

Recommendations

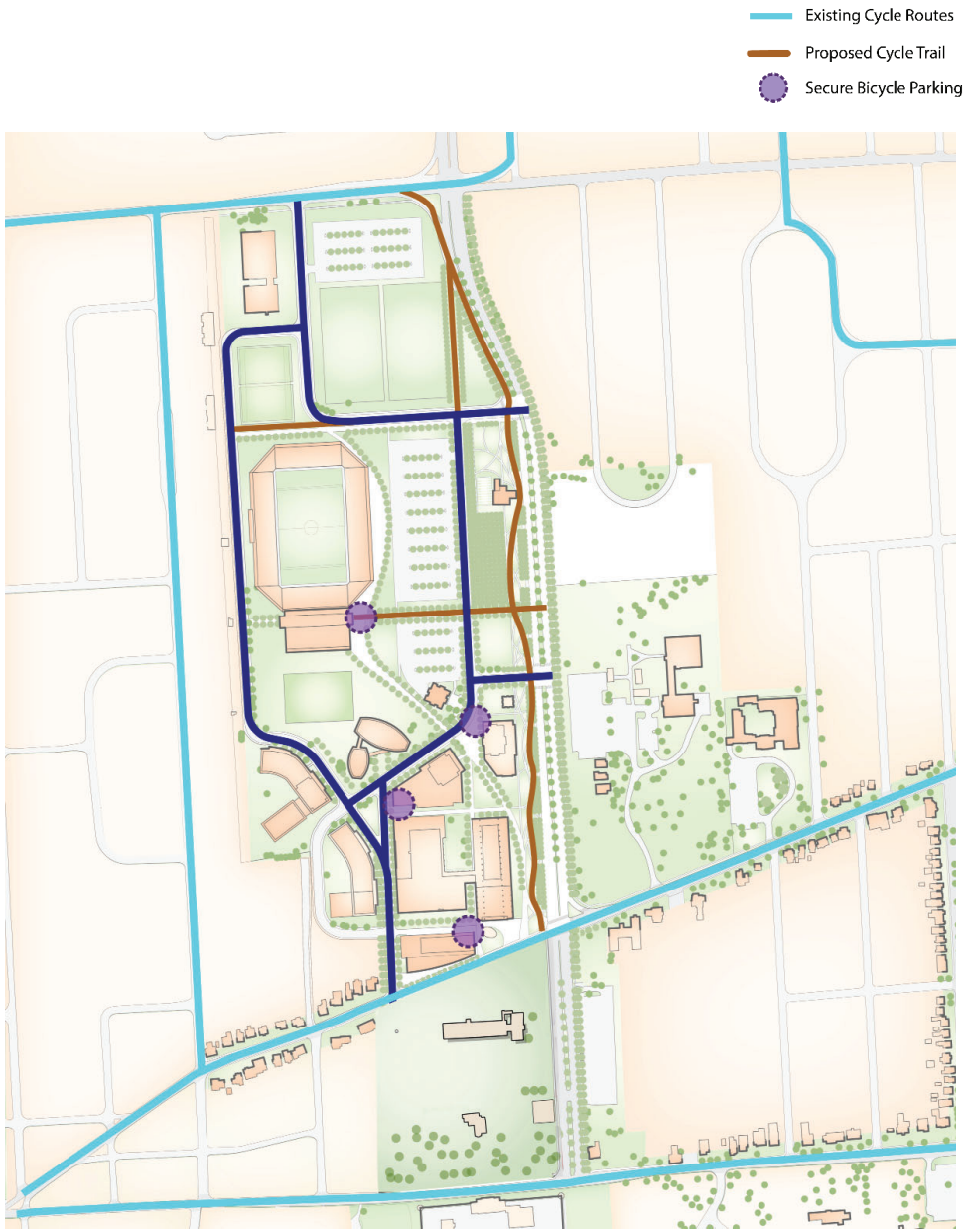
1. Ensure a comprehensive bicycle network consisting of safe, prioritized areas for cyclists throughout West Campus.

2. Locate a concentration of cycling facilities at the future West Campus Square to promote cycling as a preferred mode of transportation between Main and West Campus.

3. On streets indicated as Proposed Cycling Routes on Figure 6-31, ensure frequent bicycle parking in the form of bike posts, rings or racks located within 20 metres of cycling routes.

4. Include bicycle parking considerations in site planning for new developments including secure bike lockers, bike cages, and shower facilities.

5. Guided by Figure 6-31, incorporate installation locations for Enhanced bicycle parking facilities as part of the cycling parking strategy, recommended in Section 4.3.



▲ Figure 6-31
West Campus Cycling Network

6.5.5 Servicing Network

A comprehensive servicing strategy ensures the future functionality of West Campus, while maintaining a safe pedestrian environment.

As with Main Campus, a number of service routes and service locations have been identified in the drawing to the right, as well as service zones that can accommodate more significant loading and “back-of-house” uses. The design of servicing functions needs to be thoughtfully considered and designed, so as not to disrupt the image and the quality of the campus setting.

Recommendations

1. Design building service areas to be oriented to service routes, screened from view and, where possible, integrated into buildings.

2. Consolidated service routes should be designed to ensure appropriate service and truck access to campus facilities.

3. Where service routes overlap the pedestrian network, they should be designed as high quality pedestrian spaces to discourage unsafe vehicular behaviour and reinforce the pedestrian nature of campus.

4. Explore opportunities for a central receiving facility and works yard at the northern periphery of campus.

5. In the design of a new stadium, ensure access for service and emergency vehicles is provided to support physical activity and events.

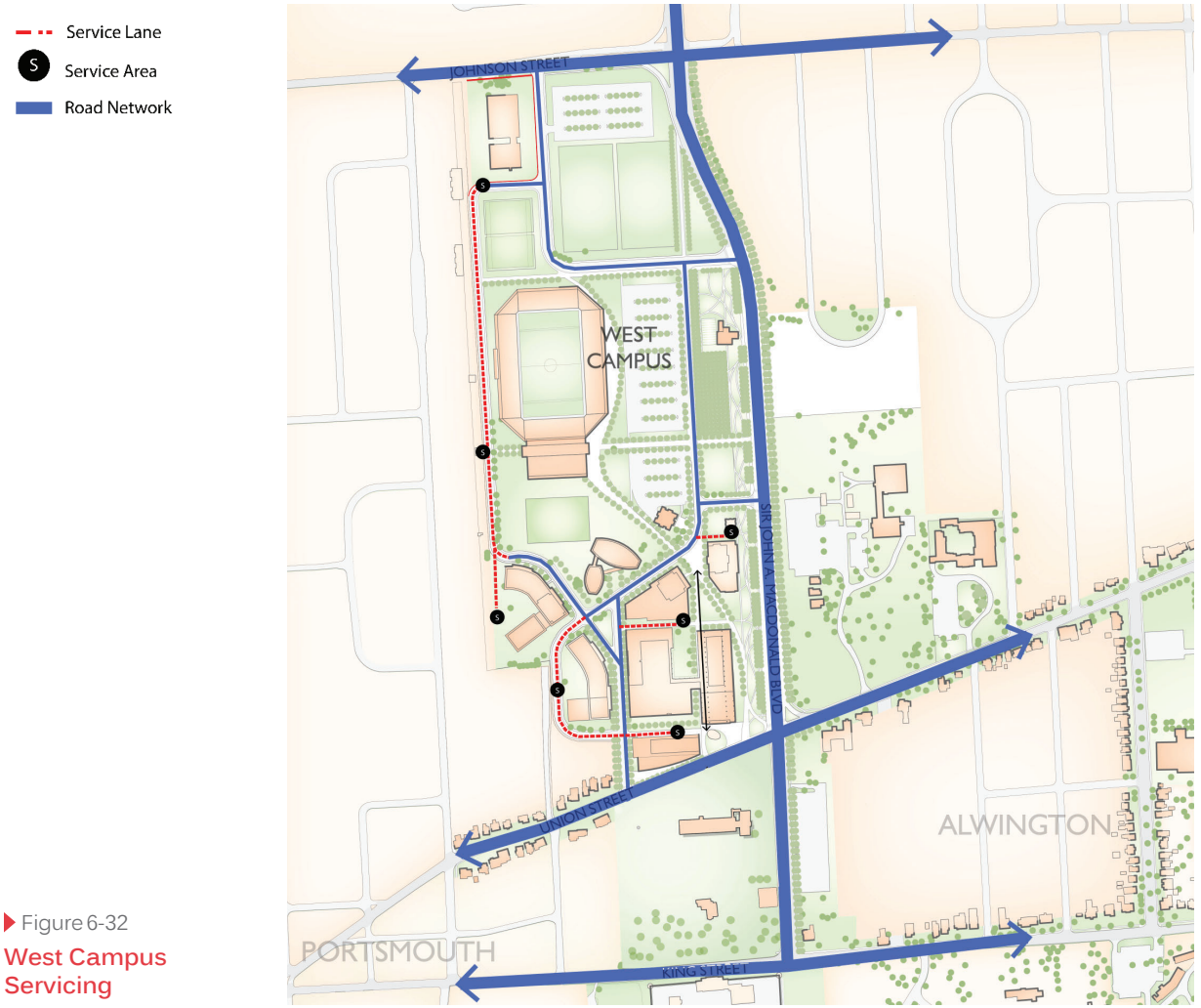


Figure 6-32
West Campus Servicing

6.5.6 Summary of West Campus Movement Projects

The plan on the opposite page compiles the array of movement projects described in this section. Their integration with new development, as well as other design and implementation considerations, are described in Part 2 of this Plan.

Movement Projects:

M6 Extension and Realignment of Hargreaves Way

M7 Coach's Lane / Sir John A. Macdonald Blvd. Intersection

M8 Water Tower Lane / Sir John A. Macdonald Blvd. Intersection Improvements

Figure 6-33
Movement Projects

6.6 Utilities

6.6.1 Main Utilities (Water, Gas, Sanitary and Storm Sewers)

The redevelopment identified as part of this Plan will affect and require upgrades to the existing utilities which support Main Campus and West Campus.

In addition to the base utilities, and understanding Queen's strong commitment to sustainability, there is also an opportunity to implement further upgrades to increase energy efficiency and develop a more resilient power system that can withstand severe weather events.

This section identifies the existing systems and proposed solutions for:

1. Main Utilities (Water, Gas, Sanitary and Storm)
2. Power
3. Heating and Cooling

Each recommendation is focused on the underlying goals and objectives of the University and based on their long term vision.

A 250 mm diameter sanitary sewer on Stadium Lane is the main wastewater collector for the West Campus servicing the bathrooms surrounding the athletic fields, the Jean Royce Hall buildings, Orr Tower, the Refrigeration Plant and portions of McArthur Hall. There are also two 150 mm diameter connections to the south side of McArthur Hall, which connect directly to the 200 mm diameter sanitary sewer on Union Avenue. Based on available servicing data, there does not appear to be any combined sewers on the West Campus.

The majority of stormwater flows from the West Campus drain to Yonge Street, via a storm sewer system that spans most of the campus and culminates with a 525 mm diameter storm sewer on Stadium Lane. In general terms, drainage is collected in the southern portion of the West Campus via catch-basins which are connected to storm sewers, however the northern portion of the West Campus has several open swales and culverts around the athletic fields, which eventually direct surface flows into the Stadium Lane sewer system. Small drainage areas on the south end of West Camps are connected to the existing 450 mm diameter storm sewer on Union Street West.

A 300 mm diameter watermain on Sir John A. Macdonald Boulevard provides the main water service for West Campus. Secondary water services are provided by a 250 mm connection on Union Street and a 300 mmm connection that runs between McArthur Hall and the Refrigeration Plant, ultimately connecting to the water-main on Yonge Street via Stadium Lane.

The coastal Engineering Lab in the northwest corner of West Campus is independently serviced from the remainder of the campus, making local sanitary, water and storm connections to the municipal utilities on Johnson Street.

The Donald Gordon Centre and associated parking has an independent servicing system. A storm sewer collection system culminates by tying into a 300 mm diameter combined sewer on Pembrooke Street. Sanitary and water servicing are from College Street.

6.6.2 Electrical Power Distribution

Recommendations

1. Municipal engineering staff should be engaged early in the development process in order to understand the level of servicing analysis that will be required to support the approval process. Depending on development timelines and the level of intensification proposed, the municipality may request a comprehensive Functional Servicing Report for the entire West Campus rather than separate smaller reports that focus only on local development applications.

2. Stormwater management solutions should attempt to take advantage of the existing open spaces that are available throughout the West Campus, where possible. Low Impact Development features such as infiltration ditches, bioswales, ponds and wetlands should be considered as they will result in cost savings relative to traditional underground stormwater management solutions, they could potentially provide learning opportunities for students and they will minimize the strain on municipal systems by promoting infiltration.

West Campus power system is fully utilized. Like Main Campus, West Campus power distribution system incorporates several levels of redundancy. Buildings are typically fed through a loop distribution system on 5kV; with each building fed from two separate sources. Redevelopment, renovation, or change of building type will result in power increase; new substation will likely be required. This is due to the agreement with the City of Kingston, which limits the amount of high voltage power available to Queen's without the construction of high voltage transformation station.

Recommendations

1. As new development on West Campus is realized, the University should reexamine the West Campus Power Supply study which was completed October 2006, with respect to redevelopment and new buildings included in this Plan. The installation of a new substation would need to be coordinated with Kingston Utilities and the City of Kingston.

6.6.3 Heating and Cooling

The existing heating and cooling systems which support the West campus are described in Section 5.6 of this document.

Heat is provided to the buildings on campus via the West steam line stemming from the central steam plant on Main Campus. The line is approximately 40 years old and in poor condition.

Cooling is provided by a dedicated central chilled water plant located on the West Campus.

Recommendations

1. The recommendations for heating and cooling both Main Campus and West Campus have been considered holistically, however, based on the geographical separation, it is suggested the West Campus to be a satellite system, separate from the Main Campus. The short, medium and long term recommendations identified in Section 5.6 provide more detail for these stand-alone West Campus systems.

2. Additionally, the recommendation for building upgrades (existing and new construction) identified in Chapter 5, are strategies which are applicable to facilities on both campuses. The technologies suggested for further investigation and consideration can also implemented on either campus depending on their feasibility.

Building Design Guidelines

7

7.1 Building Design Guidelines

The following guidelines provide general design direction for all campus development, including buildings, associated landscapes and parking facilities. Site specific direction and detailed development parameters for all development sites are provided in Chapter 9, Precinct Plans. The intent of these guidelines is to ensure the creation of high quality, durable buildings and landscaping that respond to the campus setting and reinforce a cohesive pattern of campus growth. An overarching goal is to create safe, attractive, interesting and comfortable spaces, both indoors and outdoors, by maintaining high standards of architecture, landscape and urban design, and construction.

7.1.1 Architectural Expression

1. Queen's historic buildings and signature green spaces are a fundamental part of the campus experience. New development should support the established architectural tradition of the campus while incorporating contemporary building techniques and sustainable practices. In other words, new buildings (both infill and new development) should be informed by, and respect, existing heritage buildings but not attempt to replicate them. This can be achieved through the use of consistent building elements and materials as well as appropriate, contextual building massing.

✓ The massing of new development should respond to neighbouring historic buildings to maintain a coherent design language and maintain pedestrian movement patterns. (Goodes Hall, Queen's University)

✓ Additions to historic buildings can respond to the original architecture without mimicking it, through the use of complementary materials and contextually-driven massing. (Princeton University)

7.1.2 Building Orientation and Massing

1. The placement, massing and uses of buildings shall work together to frame and animate streets, pathways and open spaces and shall reinforce the spatial structure of the campus. New buildings should have setbacks from streets and key pedestrian pathways that are consistent with those of neighbouring buildings.

2. The location and orientation of buildings shall consider integration with existing and future development on surrounding development parcels. Consideration shall be given to pedestrian connectivity, views, utility efficiencies, and opportunities for shared open space, other amenities and servicing facilities.

3. Long buildings and those with large floor-plates shall be designed to provide visual interest and break up the building massing to reduce the perceived size of the building. Exterior walls should be articulated and varied through stepbacks, varied facades and changes in material. .

4. Stepped building heights and/or articulated roof lines, particularly for larger buildings, should be considered to provide variation in massing.

5. Buildings shall be designed with high quality, durable and visually distinctive materials, as exemplified by many of the existing buildings on campus.

6. New buildings generally shall respect the low-rise and mid-rise scale and general character of development on the campus. The precinct plans identify high profile development sites, which may depart from the established campus character.

7. Consistent with the university's image of accessibility and openness, and to contribute to safety, there should be a high degree of transparency on the ground floors of buildings. Upper floors should be well fenestrated. Blank, opaque facades should be avoided, particularly at ground level and adjacent to streets, open spaces and pathways.

✗ Botterell Hall contains uniform exterior treatments that results in visual monotony and unclear building entrances.

✓ The School of Medicine uses varied materials to "break up" the building and make entrances clear and visible.

✗ Jeffery Hall's raised and sunken entry points obscure entrances from pedestrians and are in-accessible to those with mobility restraints.

✓ Ontario Hall contains a clear and weather protected entrance.

8. Building entrances shall be highly visible and directly accessible for pedestrians, and should be at grade to minimize the need for ramps. Primary entrances shall be located on the primary building frontage on a street or pedestrian pathway. Entrances should be designed as a focal point for the building frontage through the use of varying heights, changes in material, signage and other means.

9. Weather protection in the form of canopies or other appropriate means shall be provided at and around primary pedestrian entrances and in transit waiting areas. They shall also be considered for amenity areas adjacent to buildings and over outdoor connections between a primary building and associated structures.

10. Exterior spaces and the landscaping associated with a building should contribute to the campus's green character, soften and complement the appearance of the building, enhance adjacent streetscapes and pathways, and buffer private spaces from the public realm.

11. Exterior lighting, signage and walkway surfaces should be designed to incorporate the needs of those with mobility and visual constraints.

12. The site planning, landscaping and architecture of buildings shall consider opportunities to incorporate public art, including Indigenous art. This may take the form of temporary installations by Queen's students, staff, faculty, or professional artists. Installations shall be integrated with their settings to reinforce the spatial structure and character of the campus.

13. The design and retrofit of all buildings, existing and proposed, should comply with Queen's Accessibility Guidelines.

7.1.3 Building Facades and Materials

1. New developments should:

- Be designed with high quality, visually distinctive materials that have proven durability in similar climates. On Main Campus, Limestone should be considered as a cladding material for all or portions of building facades.

- Be constructed with glazing that is of high performance and without tinting, particularly when enclosing public spaces.

- Use materials that are subdued or complementary to the existing structure; they should preserve and not transform the existing building's character.

- Be clad in a co-ordinated manner, with special attention paid at service enclosures and back facing facades to ensure design consistency.

✓ The use of transparent materials at grade level provides natural surveillance of open spaces and pedestrian walkways (McMaster University, Hamilton, Ontario).

✓ Transparent building materials at grade level provide animation and safety for adjacent pedestrian pathways (Princeton University, Princeton, New Jersey)

7.1.4 Building Interiors

1. Building design should encourage natural surveillance of outdoor spaces ("eyes on the street"). Communal spaces within a building should be adjacent to and visible from the public realm of the campus.

2. Larger academic buildings should be organized around an indoor pedestrian network that includes spacious indoor pedestrian "streets" flanked with communal uses or reception areas. The indoor network should be linked to the larger campus pedestrian network and provide public access through the building, wherever possible.

3. Generally, buildings should be organized so that study, communal and classroom functions heavily used by students are on the floors linked by or close to the primary indoor circulation network. Restricted departmental uses, private offices and private labs should generally be located on upper floors.

4. Parking and servicing, storage uses, and other uses that do not require daylight should be located below grade, where possible, to minimize the mass of the building and optimize its relationship to the public realm.

✓ The alignment and design of internal hallways can integrate larger-scale new development with the existing outdoor pedestrian network. (Goodes Hall, Queen's University)

✓ Communal and study spaces are located at street level with a direct spatial connection outside. (Stauffer Library, Queen's University)

7.1.5 Sustainability

1. New buildings should be designed to minimize their environmental impacts and contribute to the overall sustainability of the campus. To this end, the University will consider applying high standards for sustainability, such as LEED™, to new development proposals.

2. Buildings should be designed for flexibility, adaptability and longevity to ensure they continue to support the University's evolving mission.

3. Significant new buildings should be designed to support sustainable roofs, such as 'green' or 'white' roofs. Roofs can also be designed to accommodate small-scale green energy infrastructure, such as photovoltaic or solar hot water, where appropriate.

4. Wherever possible, HVAC systems should be integrated with the campus energy distribution system and central energy plant.

5. New buildings should be designed to reduce stormwater impacts, and could incorporate rainwater capture and/or contribute to re-use systems.

✓ New development featuring a green roof (Vancouver Island University, Cowichan Campus)

✓ Landscape Design using porous paving materials and sloped grading can reduce the impact of stormwater. (Princeton University, Princeton, New Jersey)

7.1.6 Servicing and Utilities

1. Service access will be situated and designed to reduce the impact of the vehicles and activities while providing safe and convenient access. Specific locations and routes for loading are identified in the Precinct Plans. Loading and servicing facilities should be screened from view through landscaping or other means. Where possible and appropriate, loading could be located below grade to reduce visual impacts and minimize disruption to the building facade.

2. Parking and service entrances to buildings shall be located away from building frontages and screened from view to minimize physical and visual disruptions. Garbage, recycling, gas storage and other similar uses should be located in loading areas and screened from view.

3. Mechanical equipment and other building systems will be designed to minimize its visual impact and protect the design integrity of the building. Mechanical equipment should be located below-grade, where possible. If located on the roof, it should be screened and/or enclosed to minimize noise and visual impacts.

4. Visual impacts from substations, transformers, telecommunication boxes and other similar equipment should be minimized by locating them in buildings, wherever possible. Where exterior to a building, they should be integrated into the landscape design.

✓ Servicing routes should be designed to reduce interference with pedestrian safety, through the incorporation of clear pedestrian routes in the form of sidewalks or pavers (Princeton University, Princeton, New Jersey)

✓ Loading and servicing areas can be screened from view through landscaping or other means (Princeton University, Princeton, New Jersey).

7.1.7 Parking

1. Surface parking areas shall incorporate high quality landscape design that:

    - Breaks up large parking areas into smaller lots;
    - Screens parking areas from public views from streets and key pedestrian pathways while maintaining safety;
    - Includes generous tree planting around and within parking areas, to mitigate visual impacts and provide shade that reduces heat island effects;
    - Considers opportunities for porous pavement materials, bio-swales and other innovative stormwater management techniques; and
    - Ensures the provision of safe, convenient, accessible and highly landscaped pedestrian travel routes to and through surface parking areas.

2. Above-grade parking structures shall be designed to minimize adverse impacts on the campus environment. They should be integrated with, and located behind, other uses and buildings, particularly along key campus streets and pathways. At a minimum, parking structures should have active uses at grade along their frontages. The potential to accommodate a portion of structured parking below grade shall be considered.

3. Driveways and access points for surface parking lots, structured parking facilities, pick-up and drop-off areas, and building servicing facilities should be carefully designed to minimize visual impacts and reduce the potential for pedestrian and vehicular conflicts.

✓ A tree-lined surface parking lot screens parking from view and provides safe pedestrian travel routes (Cornell University, Ithaca, NY)

✓ Generous tree plantings integrated with pedestrian routes, can provide shade and screen parking from view (Princeton University, Princeton, New Jersey).

8 Implementation

The Campus Master Plan is just the first step in realizing the evolution of the Queen's campus. This chapter provides direction for the near-term, demonstrating how projects and initiatives may be achieved to support campus planning goals.

This chapter also provides guidance to the procedure and processes to implementing change. Part 2 of the Campus Master Plan provides further implementation direction for specific development projects precinct by precinct.

Figure 8-1
Long-term vision for Queen's Campus Lands

Buildings in white illustrate potential new buildings, while existing buildings and buildings under construction are illustrated in yellow.

8.1 Coordinated Landscape and Infrastructure Projects

This Plan has identified a number of project and initiatives that contribute to the evolution of the campus. These projects may be implemented by Queen's in the upcoming years. The projects and initiatives include landscape improvements, and initiatives that will enhance campus movement and sustainability. A full list of Key University Projects - priority open space and movement improvements - has been compiled and illustrated in Figure 8-2. A description and illustration of key projects that may be implemented within a 15-year planning horizon are identified in Section 8.2. The remaining recommended University Projects can be implemented over time as opportunities arise and in conjunction with adjacent development.

Landscape Projects:

Main Campus Walks, Streets and Plazas

- **L1** Chown Hall Walk
- **L2** Fleming Walk
- **L3** University Avenue Streetscape Improvements
- **L4** Fifth Field Company Lane Streetscape
- **L5** Union Street Streetscape Improvements
- **L6** Library Square
- **L7** Arts Square
- **L8** McLaughlin Square

West Campus Walks, Streets and Plazas

- **L9** West Campus Green
- **L10** West Campus Walk
- **L11** Ceremonial Trail
- **L12** Athlete's Plaza
- **L13** Mascot Plaza
- **L14** West Campus Square

Main Campus Gateways

- **G1** University Avenue / Earl Street Gateway
- **G2** Division Street / Earl Street Gateway
- **G3** Union Street / Barrie Street Gateway
- **G4** King Street / Albert Street Gateway
- **G5** Union Street / Albert Street Gateway

West Campus Gateways

- **G6** Sir John A. Macdonald Blvd. / Johnston Street Gateway
- **G7** Sir John A. Macdonald Blvd. / Coach's Lane Gateway
- **G8** Sir John A. Macdonald Blvd. / Union Street Gateway
- **G9** deleted
- **G10** Union Street / West Campus Blvd. Gateway

Movement Projects:

Campus-Wide

- **M1** University Shuttle

Main Campus

- **M2** Union / University Intersection Improvements
- **M3** Union / Division Intersection Improvements
- **M4** King / Albert Intersection Improvements
- **M5** University Avenue Pedestrian Crossings Improvements

West Campus

- **M6** Extension and Realignment of West Campus Blvd.
- **M7** Coach's Lane / Sir John A. Macdonald Blvd. Intersection
- **M8** Water Tower Lane / Sir John A. Macdonald Blvd. Intersection Improvements

▲ Figure 8-2

Key University Projects

8.2 Near Term Plan

The 50 year vision illustrated in Chapter 3, and elaborated upon in Chapters 4 to 6, sets out a full range of development opportunities for the University to consider over the long term. The Near Term Plan (Figure 8-3) illustrates one potential evolution of the campus in the interim that aligns near term needs, opportunities, and current initiatives.

Areas envisioned for change in the near term are in colour, while parts of campus untouched remain in grey.

Although there are many ways the future may unfold, the Near Term Plan provides an opportunity to review the implications of near term decisions and frame discussion regarding the location and extent of investment and infrastructure required to support this evolution.

The Near Term Plan reflects a number of principles and objectives for campus change, utilizing a selection of the projects identified in this plan.

The Near Term Plan reflects:

- A general order of magnitude of development that may be expected reflecting current initiatives, modest growth relative to historic trends, and the potential for shared projects and market related development.
- The careful positioning of development on Main Campus, balanced with increased investment on West Campus.
- The renewal and/or redevelopment of buildings with the most pressing deferred maintenance needs, including Kathleen Ryan Hall, Jeffery Hall, Harrison-LeCaine Hall, and the former Prison for Women building.

Figure 8-3
Near Term Plan

Buildings in white illustrate potential new buildings, while existing buildings and buildings under construction are illustrated in yellow.

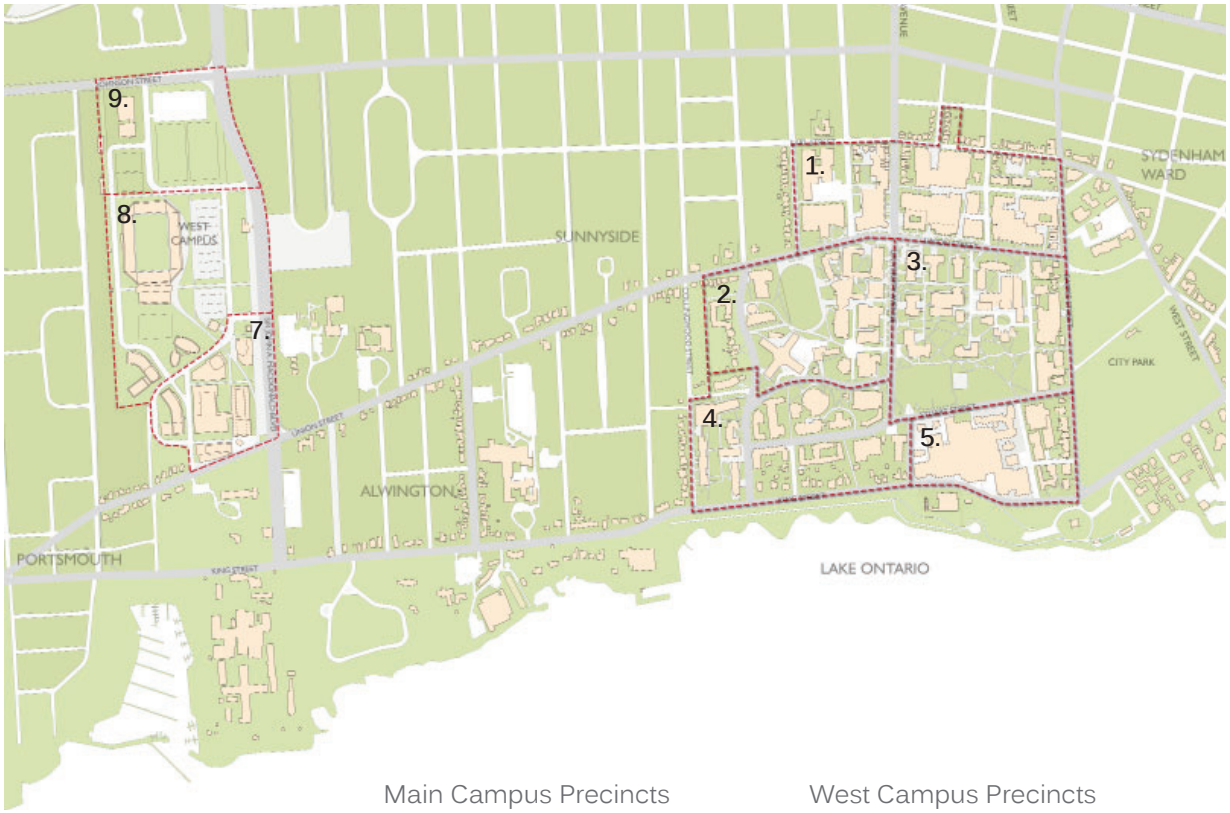
- Modernized teaching and research facilities achieved through new development and building renovations.
- Preservation of historically significant buildings and landscapes.
- The creation of a mixed-use community “node” on West Campus that includes market housing, academic and teaching space, commercial space, clinics and other student and resident amenities.
- The creation of a renewed and expanded “athletics campus” consisting of existing plans from the Athletic and Recreation department.
- Improved pedestrian and cycling infrastructure realized through partnerships with the City of Kingston.
- New upper year housing on Main or West Campus.
- Renewed Library services consistent with direction of the LAMP.
- Additional parking lots on West Campus and an improved University Shuttle service between campuses.

8.3 Precinct Plans

Part 2 of this Plan, Precinct Plans, is an integral part of the Campus Master Plan that serves as an implementation manual for Part 1 of the plan. It provides design direction for new development and Campus Master Plan Projects to ensure they are implemented within the larger campus planning framework. Part 2 is intended to assist project managers, decision makers and other members of the University community to make decisions around development, project implementation and other initiatives.

The precinct plans divide Main and West Campus into seven precincts in order to provide specific place-based development direction and establish specific development parameters for each development site. They consolidate the opportunities and requirements for campus evolution, providing a convenient and simplified framework in which to plan and evaluate campus projects within the comprehensive guidelines of the Campus Master Plan.

The precinct development guidelines consist of two major components: a development



▲Figure 8-4
Precinct Boundaries

Main Campus Precincts
1. North of Union Precinct
2. Tindall Precinct
3. Queen's Quadrangle Precinct
4. Stuart Precinct
5. Healthcare Precinct

West Campus Precincts
6. Deleted
7. West Campus Square Precinct
8. Athlete's Village Precinct
9. Johnson Street Precinct

Figure 8-5

Structure and Content of Precinct Plans

framework map and a corresponding development matrix. The precinct plan framework map locates development and renewal parcels within the context of the Campus Master Plan. It identifies development sites, site planning considerations for each development site, major open space initiatives, and movement infrastructure and initiatives.

The development matrix complements the precinct plan framework drawing, providing a comprehensive table of development parameters and other considerations for each development and renewal site. Parameters include minimum and maximum lot coverages, building heights and gross floor areas. Permitted land uses are also indicated, with required land uses shown in bold. Enabling projects are those projects and initiatives that must be completed before development takes place, such as replacement or removal of current uses that occupy the site. Coordinated projects are larger projects and initiatives that should be considered and addressed in the design of the site. These may include landscape projects or coordinated streetscape initiatives that should be reflected in the new development. Figure 8-5 illustrates structure and content for Precinct 6.

The precinct plans should be referred and adhered to during all pre-construction phases of project planning, including site selection, programming, schematic and detailed design. Proposals that depart significantly from the precinct plans should be subject to a review process where they must demonstrate that they achieve the principles, objectives and general intent of the Campus Master Plan.

Where large parcels are to be developed in phases, a phasing and development plan should be created for the entire parcel in conjunction with detailed site planning for the proposed development. This will ensure coordination of pedestrian and vehicular circulation and address impacts to the larger open space and movement networks.

8.4 Campus Planning Process, Monitoring and Update

This section describes how the Campus Master Plan should be used and maintained by Queen's University to guide decisions about campus development, landscape creation and management, and infrastructure improvements. This includes both recommendations for how the Plan can be integrated into the Capital Approvals Process, as well as how it can be monitored and amended to ensure it remains relevant and responds to emerging University needs. Broadening and maintaining awareness of the Plan and monitoring its effectiveness will ensure it remains an essential tool for shaping the future campus. The review structures and process described in this section may also evolve over time; however the objective of clearly articulating University priorities and demonstrating how emerging projects support these priorities will remain paramount.

8.4.1 Campus Master Plan Amendments and Updates

This Plan is the overarching policy document of the University, with respect to campus development, landscape creation and management, and infrastructure improvements. However it should be maintained as a living document, adapting to emerging and changing needs and institutional directions. Amendments and updates to this Plan may be considered, and should be explicitly adopted when such changes would be beneficial to the University and are consistent with the established planning principles.

Both major and minor amendments to this Plan will be reviewed by the Campus Master Planning Advisory Committee (CMPAC) for comment. Major amendments should be approved by the Senior Leadership Team (SLT) and reported to the Capital Assets and Finance Committee. Minor amendments are to be approved by the Senior Leadership Team (SLT) of the University. Minor amendments are considered those that are contained in Part 2 of the Campus Master Plan, which is intended to be updated and revised as necessary, within the broader framework established in Part 1.

The University will monitor the success of the Campus Master Plan through an assessment of its effectiveness in the planning process as well as its relevance and responsiveness to evolving University priorities. The Chair of the CMPAC should be responsible for overseeing this monitoring. Such regular and ongoing reviews of the Campus Master Plan will provide a frequent record of evaluation, serving as useful input into a future plan update.

The University will also continue its pattern of comprehensively reviewing and updating the Plan on a 10-year cycle. Depending on the outcome of plan monitoring, the University may consider a minor update to the plan on a 5-year cycle.

8.4.2 Integrating the Campus Master Plan into the Queen's Major Capital Project Approvals Process

The Campus Master Plan should be referred to at the outset of all development planning and design processes, and returned to at each milestone, so that it can effectively influence project formulation, site selection, design development, design review, and project approval. In amending established processes to incorporate the Campus Master Plan, policies should be adopted that make it easier to comply with the Campus Master Plan rather than to diverge from it. Project proponents should follow a transparent process that demonstrates how their project conforms to the Campus Master Plan, or thoroughly justifies any variation from it. Significant variances from the Campus Master Plan should require the approval of the SLT after initial review by CMPAC and potentially up to and including the Capital Assets and Finance Committee and Board of Trustees.

Project planning processes should both inform and seek input from relevant stakeholders, both on and off campus, at appropriate decision points. Where proposed building projects trigger an Enabling or Coordinated Project, corresponding planning processes for these, also informed by the Campus Master Plan, will need to be initiated.

The Campus Master Plan should be integrated into the Major Capital Project approvals process and projects should be reviewed by the Campus Master Planning Advisory Committee (CMPAC) at major milestones, including all siting and massing, site plans and landscapes. Accordance or variance with the Campus Master Plan, along with CMPAC consultation, will be included in major capital project business cases.

8.4.3 Funding Models

The Campus Master Plan identifies a number of University Projects (also referred to as Enabling or Coordinated Projects) that, either because of their nature or their scale, do not have existing champions or funding sources. With limited funding opportunities, the University should explore alternative funding models for both development and open space projects.

Queen's already uses fees from the provision of parking to build reserves that fund future related infrastructure improvements. This model should also be explored to fund landscape projects or infrastructure and utilities. One option may be to levy building projects to create funds for capital replacements through a standard percentage of a project budget. This reserve fund could be for critical infrastructure replacement, for "soft" infrastructure projects (such as the open space projects in this plan), or for both. Were the University to implement such a reserve fund, it should be accompanied by a capital reserve plan which identifies and prioritizes capital projects and repairs, identifying the amount of funds to be collected each year (which would then inform the levy percentage amount).

Another possible tool for funding is partnerships with the private sector, which is increasingly being used by other Ontario and Canadian Universities. The University may consider establishing an arms-length development corporation, run by a professionals with expertise in real estate and development. The corporation's mandate would be to manage Queen's land assets, as well as to explore opportunities for appropriate partnership opportunities with private developers to partially or fully fund new university facilities (at appropriate places on campus) to assist the funding of university projects. Residential projects, beyond first year residences, may be a example of such a project, however each project needs to be examined on a case-by-case basis.

Queen's University

Campus Master Plan • Part 2

Precinct Plans

9

9.1 Overview

The Precinct Plans are an important tool for implementing the Campus Master Plan. The plans provide a convenient and simplified framework in which to plan and evaluate campus projects within the comprehensive guidelines of the Master Plan. While illustrating the inter-related nature of the campus environment, they consolidate the opportunities and requirements for campus evolution for each renewal and development site on a place-by-place basis.

Figure 9-1
Precinct Boundaries

Main Campus Precincts

1. North of Union Precinct
2. Tindall Precinct
3. Queen's Quadrangle Precinct
4. Stuart Precinct
5. Healthcare Precinct

West Campus Precincts

6. Deleted
7. West Campus Square Precinct
8. Athlete's Village Precinct
9. Johnson Street Precinct

Main and West Campus have been divided into nine precincts in total (illustrated in Figure 9-1), each with their own plan consisting of detail guiding future development, open space, and mobility investments. The precinct plans operate in two ways: first, they describe the role, use and form of specific places on campus at a scale at which more detailed recommendations can be best illustrated and understood; and second, they describe these places holistically, addressing building form, views, circulation, servicing and parking and other aspects of the physical environment.

The growth and evolution of each individual precinct will contribute to achieving the vision for the larger campus. Constantly relating back to the campus vision and master plan objectives, the precinct plans provide detailed implementation guidelines for growth and physical improvement in each part of campus.

The precinct plans essentially establish the rules for development and identify the enabling and coordinated projects that must be considered in new building and renewal projects. They provide direction for the entire campus, with specific focus on areas of change.

Where large parcels are to be developed in phases or with multiple buildings, a phasing and development plan should be created for the entire parcel in conjunction with detailed site planning for the proposed development. This will ensure coordination of pedestrian and vehicular circulation and address impacts to the larger open space and movement networks. Phasing Plans should also be considered where development sites are adjacent or share important infrastructure such as service areas.

The precinct plans should be referred and adhered to during all pre-construction phases of project planning, including site selection, programming, schematic and detailed design. They establish the enabling and coordinated projects that must be considered to ensure the intended structure and function of campus is achieved. Proposals that depart significantly from the precinct plans will be subject to a review process where they must demonstrate that they achieve the principles, objectives and general intent of the Campus Master Plan.

9.2 Precinct Plan Components

Each precinct plan consists of three major components, all of which are illustrated with existing conditions images and model illustrations.

Precinct-Specific Guidelines

These include an overview of the precinct and bulleted guidelines to define the character of the area and clarify investment in open space and movement networks. They also provide specific direction for the development sites, including renewal, redevelopment and new construction

Development Framework Map

The Development Framework Map locates development parcels within the context of the master plan. It identifies development sites, site planning considerations for each development site, major open space initiatives, and movement infrastructure and initiatives. The elements referred to in each Development Framework Map is detailed on the following spread.

Development Parcel and Type of Project		Development Parameters						Permitted Land Uses	Enabling and Coordinated Projects	
	Project Type	Parcel Footprint (m^2)	Min/Max Coverage		Min/Max Height (Storeys)		Min/Max Gross Floor Area (m^2)		Permitted Uses (required in bold)	Enabling Projects	Coordinated Projects
Precinct 1 North of Union											
1A	New Development	6,426	50%	75%	2	4	6,426	19,278	• library • academic • administrative	• Protect and/or integrate historic homes into new development	
1B	Planned Development/ Facility Renewal	10,322	75%	100%	4	6	30,966	58,835	• active/public uses at grade • below-grade parking • academic	• Protect and/or integrate historic Deutsch University Center, and Physical Education Center Facade	
1C	Planned Capital Project	5,993	50%	75%	4	8	1,745	35,958	• academic • administrative • below-grade parking	• Protect and/or integrate historic homes into new development	
1D	New Development	2,793	75%	100%	2	4	4,190	11,172	• residential		
1E	Planned Capital Project	1,163	75%	100%	2	4	1,745	4652	• residential		
Total		**28,418**					**55,051**	**128,443**			

▲ Figure 9-2 **Development Matrix**

Development Matrix

The Development Matrix complements the precinct plan development framework map, providing a comprehensive table of development parameters and other considerations for each development site. **Development parameters** include minimum and maximum lot coverages, building heights and gross floor areas. Permitted **land uses** are also indicated, with required land uses shown in bold. **Enabling projects** are those projects and initiatives that must be completed before development takes place, such as replacement or removal of current uses that occupy the site. **Coordinated projects** are larger projects and initiatives, typically University Projects, that should be considered and addressed in the design of the site.

▲ Figure 9-3

Precinct Plan Overview

The following elements are illustrated in the framework maps and listed in the supporting legend for each precinct area:

1A

Development Parcel

These are sites where new development may be located. The development parcel overlay indicates the location of the building footprint as well as areas for landscaping, courtyards, walkways, service/ loading areas or other features that extend beyond the walls of the building. The development matrix indicates the specific parameters for parcel coverage.

Key Building Frontage

These are areas to which buildings should be built to in order to reinforce the spatial continuation and hierarchy of campus open spaces. Primary entrances should also be oriented toward the key frontages and should feature a high degree of glazing.

Primary Entrance

These are the recommended locations for building entrances, which are generally located along the highest order pedestrian route. While there is some flexibility in the location of primary entrances, they should be located along key building frontages. In some cases, such as select building sites along Gordon Street, buildings should have two primary entrances.

Building Demolition

This indicates where existing buildings must be demolished to allow for new development. Buildings to be demolished include underutilized buildings or buildings facing a backlog of deferred maintenance that are not considered historically significant.

Historic Buildings

This indicates buildings or portions of buildings that are considered historically significant and will be retained as part of any renewal or redevelopment.

Gateway

These are important points of transition between the city and campus. Gateways will feature a consistent approach to landscape, street and pedestrian network design to signify arrival at campus and assist with wayfinding.

Picturesque Landscapes

Picturesque landscapes are expansive open spaces, typically characterized by lush, informally placed plantings and meandering walkways.

Courtyards and Plazas

These are smaller open spaces framed by development on some or all sides, typically consisting of hard surfaces and containing ample opportunities for resting and socializing.

Small Green

Small greens are smaller open spaces that add to campus sense of place and may provide an environment for passive activities.

Streetscape Initiative

These are improvements to streetscapes to be co-ordinated with the City. Improvements may include new or enhanced tree and shrub plantings, special pavement treatments, or the installation of street furniture.

Intersection Improvements

These indicate intersections where new or upgraded traffic crossings should be installed. Types of enhanced crossings may include signalized intersections, pedestrian-activated crossings, paint strips or speed tables.

Cycle Route

Indicates a dedicated on-street bicycle routes on roads. Generally, all campus streets will also serve as cycling routes. Major bicycle parking facilities should be conveniently accessible from cycling routes.

Parking, Servicing and Loading Access

These are routes that support vehicular access to loading areas and large-scale parking lots but do not contribute to the larger street network. In some cases, these access routes are shared with important pedestrian routes. In these cases, access routes should be designed primarily as pedestrian zones with the potential to accommodate service and loading traffic.

Loading and Service Zone

These are areas around buildings that must accommodate vehicular traffic for service and loading purposes. They should generally be located away from primary entrances and shielded from view.

Underground Parking

This indicates existing underground parking facilities.

Surface Parking

This indicates areas for surface parking.

Utilities

This indicates underground Utility lines that must be considered in the design of any new development.

9.3 Coordinated Landscape and Infrastructure Projects

The Precinct Plans are cross-referenced with Landscape and Movement Projects as described in Chapters 6 and 7 of Part 1 of this Plan. These projects are illustrated in the framework maps and relevant projects are included in the coordinated projects list for each precinct matrix.

Landscape Projects:

Main Campus Walks, Streets and Plazas

- L1 Chown Hall Walk
- L2 Fleming Walk
- L3 University Avenue Streetscape
- L4 Union Street Streetscape
- L5 Fifth Field Company Lane Streetscape
- L6 Library Square
- L7 Arts Square
- L8 McLaughlin Square

West Campus Walks, Streets and Plazas

- L9 West Campus Green
- L10 West Campus Walk
- L11 Ceremonial Trail
- L12 West Campus Square
- L13 Athlete's Plaza
- L14 Mascot Plaza

Main Campus Gateways

- G1 University Avenue / Earl Street Gateway
- G2 Division Street / Earl Street Gateway
- G3 Union Street / Barrie Street Gateway
- G4 King Street / Albert Street Gateway
- G5 Union Street / Albert Street Gateway

West Campus Gateways

- G6 Sir John A. Macdonald Blvd. / Johnston Street Gateway
- G7 Sir John A. Macdonald Blvd. / Coach's Lane Gateway
- G8 Sir John A. Macdonald Blvd. / Union Street Gateway
- G9 Deleted
- G10 Union Street / West Campus Blvd. Gateway

Movement Projects:

Campus-Wide

- M1 University Shuttle

Main Campus

- M2 Union / University Intersection Improvements
- M3 Union / Division Intersection Improvements
- M4 King / Albert Intersection Improvements
- M5 University Avenue Pedestrian Crossings Improvements

West Campus

- M6 Extension and Realignment of West Campus Blvd.
- M7 Coach's Lane / Sir John A. Macdonald Blvd. Intersection
- M8 Water Tower Lane / Sir John A. Macdonald Blvd. Intersection Improvements
- M9 Deleted

▲ Figure 9-4

Landscape Initiatives Overview

9.4 Precinct Plans

Main Campus Precinct 1

North of Union

Precinct-Specific Guidelines

The North of Union Precinct is characterized by contemporary teaching and student life facilities, including some of the University's most frequented spaces: Stauffer Library, the Athletic and Recreation Centre (ARC), and the Physical Education Centre (PEC). Containing two of Main Campus' few remaining large development opportunities, this precinct will continue to be the location of larger-scale contemporary development (these larger parcels also provide opportunities for the incorporation of below-grade parking facilities). The siting and layout of these new facilities should be designed in a way that strengthens pedestrian connections from the campus core to the residential neighborhood north of campus. Co-ordinated public realm improvements should aim to unify and beautify the Union Street streetscape. The intersection of University Avenue and Union Street, the future Library Square, will receive public realm improvements to facilitate gathering and social interaction. Intersection improvements at University Avenue, Division Street, and Barrie Street will mitigate disruption to pedestrian movement.

1. New development should align internal hallways and building entrances with existing pedestrian routes to facilitate continuous and co-ordinated movement patterns. The renewal of the PEC (Parcel 1B) should ensure its pedestrian routes are aligned with the ARC's existing entrances.

2. The pedestrian experience along Union Street at University Avenue will be enhanced through the implementation of new seating, public art, and pavement treatments in line with Project L6, Library Square (detailed in Part 1, Section 5.4.3).

3. To create a continuous and co-ordinated streetscape, new tree plantings and pavement widening east should be considered along Union Street east of the Divison Street and Fifth Field Company Lane.

4. Development at the edge of campus will respect adjacent low-rise neighbourhoods through compatible buildings heights and/or the incorporation of historic houses to maintain the historical street characters.

Figure 9-5
Precinct 1 Perspective

Earl Street
Alfred Street
University Avenue
Union Street
Division Street
Barrie Street

Main Campus Precinct 1

North of Union

Figure 9-6

Precinct 1 Proposed and Existing Conditions

	Project Type	Parcel Footprint (m^2)	Min/Max Coverage		Min/Max Height (Storeys)		Min/Max Gross Floor Area (m^2)		Permitted Uses	Enabling Projects	Coordinated Projects
Precinct 1 North of Union											
1A	New Development	6,426	50%	75%	2	4	6,426	19,278	• academic • library • below-grade parking	• Protect and/or integrate historic homes along University Avenue into new development • Integrate loading and services uses along Alfred Street	• University Avenue Streetscape Improvements • University Avenue / Earl Street Gateway • Union / University Intersection Improvements
1B	Planned Capital Project	1,020	75%	95%	4	6	3,060	5,814	• academic • athletic/recreation • student life spaces (student government offices, club spaces, and student-run services, etc.) • below-grade parking	• Integrate active-uses at grade	• Union Street Streetscape Improvements • Library Square • Union / University Intersection Improvements • Union / Division Intersection Improvements • Athletes Walk • Innovation Way
1C	Planned Capital Project	5,993	50%	75%	4	8	11,986	35,958	• academic • below-grade parking	• Protect and/or integrate historic homes along Barrie Street into new development • Integrate loading and services uses off of existing Clergy Street West lane • Relocate/compensate for displaced parking	• Union Street Streetscape Improvements • Other Projects for Consideration: Barrie Street / Clergy Street Gateway
1D	New Development	2,793	75%	95%	2	4	4,190	10,613	• student residence • administrative	• Demolish buildings along Clergy Street and relocate displaced uses	• Division Street / Earl Street Gateway
1E	New Development	989	75%	95%	2	4	1,484	3,758	• student residence • administrative	• Demolish MacGillivray Brown Hall and relocate displaced uses	• Other Projects for Consideration: Barrie Street / Clergy Street Gateway
1F	New Development	950	75%	95%	2	4	1,425	3,610	• student residence • administrative	• Demolish buildings along Aberdeen Street and relocate displaced uses	
Total		**18,171**					**28,571**	**79,031**			

▲ Figure 9-7

Main Campus Precinct 1

Main Campus Precinct 2

Tindall Precinct

Precinct-Specific Guidelines

The Tindall Precinct consists of a number of academic buildings from a variety of eras. Development sites, consisting of underutilized parcels and buildings with critical deferred maintenance, provide a range of opportunities for new facilities and open space enhancement. The east portion of the precinct contains a number of the University's older academic and administrative buildings and redevelopment here will reinforce existing open space and movement patterns. The western portion of the precinct contains larger-scaled buildings and open spaces. Development sites in this area provide new opportunity to strengthen the image of this quieter part of campus and are suitable for academic buildings and student residences.

1. As a high profile location, Parcel 2B should incorporate a distinct gateway feature into its design at its northwest corner, and be coordinated with a distinctive landscape treatment that signals entry to campus. This parcel can support two new academic buildings, which should be integrated with landscape enhancements on all sides of the new development to beautify the area around Tindall Field. New development here may contain a lawn for passive recreation fronting Albert Street or may be built closer to the street's edge.

2. As sites at the edge of campus, Parcels 2A and 2B should consider their adjacency to low-rise neighbourhoods in their design and transition appropriately in height and massing.

3. The redevelopment of Jeffery Hall and Harrison-LeCaine Hall should be co-ordinated with the installation of Arts Square, a new intimate square that can feature public art and street furniture.

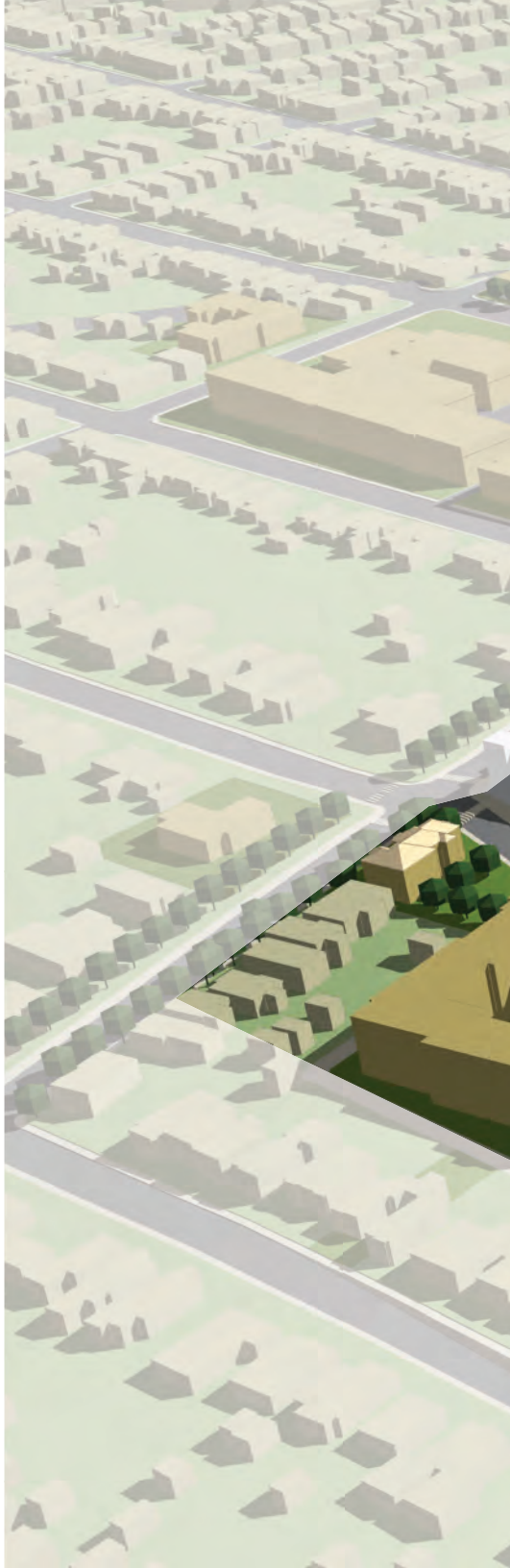


Figure 9-8
Precinct 2 Perspective

Albert Street
Bader Lane

Main Campus Precinct 2

Tindall Precinct

▼ Figure 9-9

Precinct 2 Proposed and Existing Conditions

	Project Type	Parcel Footprint (m^2)	Min/Max Coverage		Min/Max Height (Storeys)		Min/Max Gross Floor Area (m^2)		Permitted Uses	Enabling Projects	Coordinated Projects
Precinct 2 Tindall Precinct											
2A	New Residence Project Under Construction	4,829	50%	75%	2	4	4,829	14,487	• academic • administrative • student residence	• Demolish buildings along Albert Street and Collingwood Street, and relocate displaced uses • Relocate/compensate for displaced parking	• Union Street Streetscape Improvements • Union Street / Albert Street Gateway • Other Projects for Consideration: Tindall Woods
2B	New Development	8,707	50%	95%	4	6	17,416	49,636	• academic • welcome centre • below-grade parking • athletic and related facilities	• Expand Tindall underground parking structure • Integrate parking access ramp off of Union Street into new development	• Union Street Streetscape Improvements • Union Street / Albert Street Gateway • Other Projects for Consideration: Tindall Woods
2C	New Development	1,843	75%	95%	4	6	5,528	10,504	• academic	• Demolish Jeffery Hall and relocate displaced uses • Integrate loading and services uses away from the Arts Square, adjacent to Ellis Hall loading zone	• Arts Square • University Avenue Streetscape Improvements • University Avenue Pedestrian Crossing Improvements
2D	New Development	2,000	75%	95%	4	6	6,000	11,400	• academic	• Demolish Harrison-Lecaine Hall and relocate displaced uses • Integrate loading and services uses away from the Arts Square, adjacent to Victoria Hall loading zone	• Arts Square • Other Projects for Consideration: Chown Hall Green
Total		**17,380**					**33,773**	**86,026**			

Figure 9-10

Main Campus Precinct 2

Main Campus Precinct 3

Queen's Quadrangle Precinct

Precinct-Specific Guidelines

The Queen's Quadrangle Precinct contains the historic core of campus as well as a large portion of its eastern edge. Change here will be modest, with development opportunities located mainly to the rear of or between existing buildings. These sites provide opportunity for new academic uses and should also contain new student life spaces. New development in this precinct must be particularly mindful of its historic setting, with building massing that gives prominence to historic structures. New movement and landscape projects will improve movement patterns and the functionality of the historic core's internal pathways.

1. The redevelopment of Fleming Annex and Clark Hall (Parcel 3A) provides an opportunity to reconfigure the existing pathways and open space between Douglas Library and Ontario Hall through the realization of the Fleming Walk landscape project. This Walk will consolidate open space and create a view corridor that terminates with an architectural feature which should incorporated into the Fleming Annex/Clark Hall redevelopment.

2. Enhancements to Fifth Field Company Lane should be integrated with the redevelopment of Parcels 3A and 3B. The redesign of this corridor will create a more beautiful and safer pedestrian environment in this area of campus and better integrate service and delivery uses with the pedestrian movement network. This redevelopment should be co-ordinated with intersection improvements at Union Street and Division Street.

3. The redevelopment of the Cataraqui building (Parcel 3B) will continue to reinforce the pedestrian connection between Arch Street and Barrie Street and should consist of glazing on its north side that will contribute to activating this walk. As part of the Old Sydenham Ward Heritage Conservation District and with a prominent frontage on City Park, the form and heights of this redevelopment will respond to the low-scale housing form of Barrie Street.

4. All new development should strive to include st life space such as cafés, student club space or a LINQ facility as well as athletic facilities to support the recreational uses of the Queen's Quadrangle.

Figure 9-11
Precinct 3 Perspective

Union Street
Stuart Street
Arch Street
Barrie Street

Main Campus Precinct 3

Queen's Quadrangle Precinct

Figure 9-12

Precinct 3 Proposed and Existing Conditions

	Project Type	Parcel Footprint (m^2)	Min/Max Coverage		Min/Max Height (Storeys)		Min/Max Gross Floor Area (m^2)		Permitted Uses	Enabling Projects	Coordinated Projects
Precinct 3 Queen's Quadrangle Precinct											
3A	New Development	3,287	50%	95%	4	6	6,574	18,736	• academic • student life spaces (student government offices, club spaces, and student-run services, etc.)	• Demolish Fleming Annex and Clark Hall and relocate displaced uses • Integrate new development with Fleming Hall and Carruthers Hall • Integrate access to underground parking	• Fleming Walk • Fifth Field Company Lane reconfiguration and streetscape Improvements
3B	New Development	11,184	50%	75%	4	8	22,368	67,104	• academic • administrative • student life spaces (student government offices, club spaces, and student-run services, etc.)	• Demolish the rear portion of Kathleen Ryan Hall and relocate displaced uses • Protect and/or integrate historic Kathleen Ryan Hall facade with new development	• Fifth Field Company Lane reconfiguration and streetscape Improvements
3C	New Development	831	75%	95%	4	8	2,493	6,316	• academic • administrative • student life spaces (student government offices, club spaces, and student-run services, etc.)	• Demolish Cataraqui Building and relocate displaced uses	• Other Projects for Consideration: Professor's Walk, Tindall Woods
Total		**15,302**					**31,435**	**92,156**			

Figure 9-13

Main Campus Precinct 3

Main Campus Precinct 4

Stuart Precinct

Precinct-Specific Guidelines

The Stuart Precinct consists of the majority of Queen's residences, as well as a number of administrative and academic buildings. Change here will be minor in the form of redevelopment of existing structures. Located at the water's edge, new development should enhance access to King Street and Waterfront Park, a connection that will grow in importance as the Isabel Bader Centre for the Performing Arts is completed and more university programming is located there. New development fronting Alfred Street will respect neighbouring properties to the West through compatible built form. New linear pathways connecting to Waterfront Park and a plaza at the foot of University Avenue will contribute to diversifying and enhanced Main Campus' open space network.

1. As the location of the majority of first year residences, new development should include student life services and other non-faculty specific uses.

2. Parcel 4A presents an opportunity to consolidate the multiple properties located at the intersection of Alfred Avenue and Queen's Crescent. As an historically significant building, 96 Queen's Crescent should be retained and incorporated as a defining part of this redevelopment.

3. Parcel 4C illustrates a development opportunity that may occur with the redevelopment of McLaughlin Hall and renewal of the University Club. This redevelopment provides opportunity for two University projects: Chown Hall Walk and McLaughlin Square. Chown Hall Walk will provide an enhanced physical connection to Waterfront Park as well as a view corridor from Chown Hall and should be lined by trees to provide visual buffers to adjacent private residential uses. McLaughlin Square will provide a new gathering space to complement the Queen's Quadrangle, but will be contemporary in nature and smaller in size to accommodate more intimate encounters and smaller scale gatherings.

4. The redevelopment of the Rideau Building will build upon the adjacent parking lot, encompassing a larger building footprint than it currently situates., The building should address Stuart Street with key frontages.

Stuart Street
Collingwood Street

Stuart Precinct

Figure 9-14

Precinct 4 Proposed and Existing Conditions

	Project Type	Parcel Footprint (m^2)	Min/Max Coverage		Min/Max Height (Storeys)		Min/Max Gross Floor Area (m^2)		Permitted Uses	Enabling Projects	Coordinated Projects (required in bold)
Precinct 4 Stuart Precinct											
4A	New Development	2,601	50%	75%	2	4	2,601	7,803	• academic • student life spaces (student government offices, club spaces, and student-run services, etc.)	• Protect 96 Queen's Crescent building and consider displacing and relocating uses to integrate building into new development • Demolish 119, 123 and 127 Queen's Crescent buildings and relocate displaced uses	• Other Projects for Consideration: Albert Street / Bader Lane Gateway
4B	New Development	2,859	75%	95%	4	6	8,578	16,297	• academic • administrative • student life spaces (student government offices, club spaces, and student-run services, etc.)	• Demolish Rideau Building and relocate displaced uses	• Other Projects for Consideration: St. Lawrence Walk
4C	New Development	3,577	50%	75%	4	6	7,154	16,097	• academic • student life spaces (student government offices, club spaces, and student-run services, etc.) • below-grade parking	• Protect historic portion of the University Club • Demolish Film Studies Building, La Salle Building, rear portion of the University Club and 140 Stuart Street and relocate displaced uses	• Chown Hall Walk • McLaughlin Square
Total		**9,037**					**18,333**	**40,197**			

▲ Figure 9-15

Main Campus Precintct 4

Main Campus Precinct 5

Healthcare Precinct

Precinct-Specific Guidelines

The Healthcare Precinct occupies a significant spot on campus as the entryway from Downtown Kingston. All new development in this area will be evaluated in consultation with Kingston General Hospital.

1. A new Gateway feature at the intersection of King Street and Barrie Street, such as signage, public art, or special landscaping will contribute to strengthening the University's image and sense of arrival.

2. The renewal of the Louise D. Acton building (Parcel 5A) provides an opportunity for a contemporary building, suitable for uses complementary to the Health Sciences facilities in the area. The plans for Phase Two of Etherington Hall should be considered and/or incorporated with this development.

3. Height allowances on the 5A parcel need to be considered based on adjacencies; Botterell Hall, 9 storeys tall and north of parcel, Waldron Tower, 11 storeys and directly south of the parcel, as well as the 4 storey Cancer Research Institute to the east and historic Barrie Street houses beyond that. Due to these adjacencies, a building with varying heights between 6 - 12

storeys should be considered to optimize site potential and create cohesion with neighbouring properties. Due to these adjacencies, the following varying heights are recommended:

- Adjacent to Botterell Hall - 9 storeys
- Adjacent to Barrie Street Houses - 6 storeys
- At the corner of George and O'Kill - 12 storeys

4. Respecting adjacencies with other buildings and recognizing the need for a multi-function, integrated Health Science Complex; where possible, limiting floor-ceiling height on non-research floors will be incorporated to limit building height.

5. The houses on Barrie Street are considered historically significant and will be retained. It is recommended these buildings current uses be reconsidered. In particular, they may be considered for interior renovation to restore their use as residences for visiting faculty or mature students.

6. The converting of O'Kill Street to a pedestrian only area should also be considered a part of the Louise D. Acton renewal.

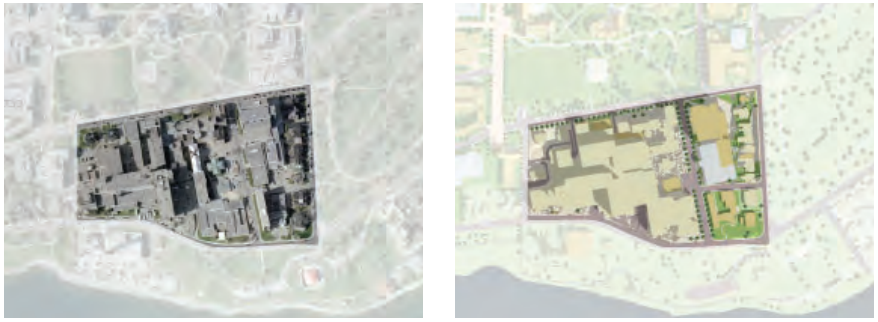
Figure 9-16
Precinct 5 Perspective

Stuart Street
King Street
Barrie Street

Healthcare Precinct

Figure 9-17

Precinct 5 Proposed and Existing Conditions



	Project Type	Parcel Footprint (m^2)	Min/Max Coverage		Min/Max Height (Storeys)		Min/Max Gross Floor Area (m^2)		Permitted Uses	Enabling Projects	Coordinated Projects (required in bold)
Precinct 5 Healthcare Precinct											
5A	New Development	2,268	75%	95%	6	12	10,206	20,730	• academic • student residence	• Demolish Louise D. Acton Building and relocate displaced uses	• converting O'Kill Street into a linear open space.
Total		**2,268**					**10,206**	**20,730**			

Figure 9-18

Main Campus Precinct 5

Deleted

Deleted

West Campus Precinct 7

West Campus Square Precinct

Precinct-Specific Guidelines

Together with the Parkfront Precinct, The West Campus Square Precinct provides a great opportunity for change at Queen's with a number of new development, landscape and movement opportunities that will improve quality of place at West Campus. With the Parkfront Precinct providing the preferred location for private development on West Campus, the West Campus Square Precinct will be West Campus' Academic core, consisting of the majority of West Campus' faculties, schools, and residences. The precinct's centrepiece is West Campus Square, which will be a new urban, vital place that offers the Queen's and Kingston communities a new hub of activity and a place to gather. New road alignments and new public spaces will activate the public realm, framing contemporary new development.

1. The installation of new walks illustrated in Part 1, Figure 6-10 will be implemented as the West Campus Square Precinct develops overtime. West Campus Walk will be considered a primary pedestrian connection. All development adjacent to West Campus Walk should contain sufficient glazing at grade with entrances oriented toward this corridor. Where possible, development should incorporate a "spill-out" uses that enhance the pedestrian experience, such as cafés and services.

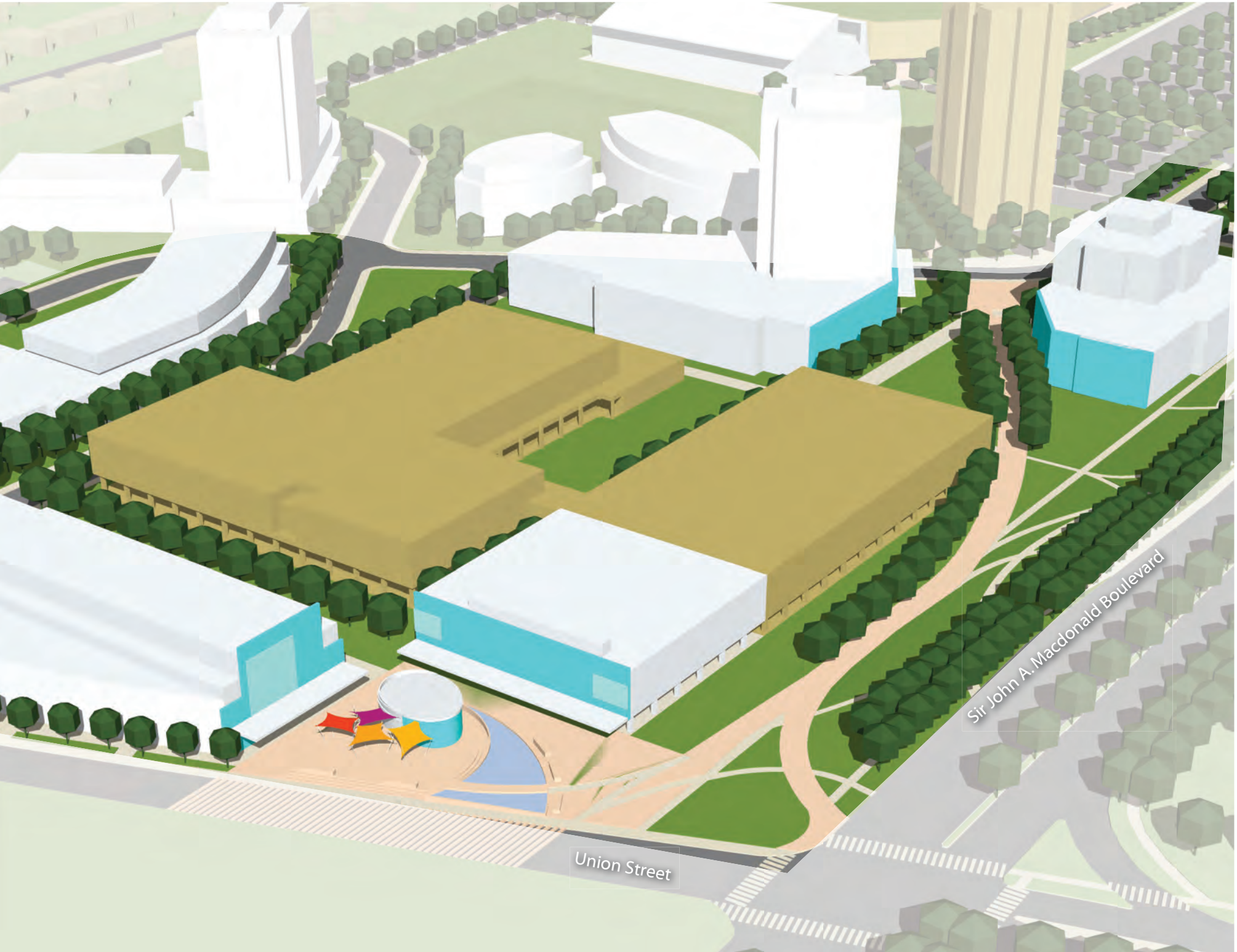
2. The design and installation of West Campus Square will be co-ordinated with development on Parcels 7D and 7E. The square will consist of hardscaping and may contain a kiosk or pavilion containing a complementary use, such as a welcoming centre, convenience kiosk, or transit information services. Both developments will have key frontages facing this square, as well as to the streets they are situated on.

3. As Jean Royce Hall is redeveloped, West Campus Boulevard will be re-configured to align with its extension south of Union Street. The new right-of-way should contain generous sidewalks lined by trees. .

4. The Ceremonial Trail will be a memorable linear green extending from the east side of Duncan McArthur Hall and bisecting the campus to arrive at Athlete's Plaza, a new space for gatherings located in the Athletic Core. Development of Parcels 7A and 7B should contain key frontages adjacent to the Ceremonial Trail and be designed to address the space through orientation and design. Mascot Plaza, located south of Parcels 7A and 7B should be incorporated into the design of the Ceremonial Trail.

5. The development of Parcel 7B must account for the relocation of the existing utility infrastructure.

Figure 9-19
Precinct 7 Perspective


Union Street
Sir John A. Macdonald Boulevard

West Campus Square Precinct

Figure 9-20

Precinct 7 Proposed and Existing Conditions

	Project Type	Parcel Footprint (m^2)	Min/Max Coverage		Min/Max Height (Storeys)		Min/Max Gross Floor Area (m^2)		Permitted Uses	Enabling Projects	Coordinated Projects (required in bold)
Precinct 7 West Campus Square Precinct											
7A	New Development	2,064	50%	75%	4	12	4,128	18,576	• academic	• Protect and/or integrate Water Tower into new development	• West Campus Green • West Campus Walk • Ceremonial Trail • Sir John A. Macdonald Blvd. / Union Street Gateway
7B	New Development	3,656	75%	95%	4	16	10,968	55,571	• academic	• Integrate building around refrigeration plant	• West Campus Green • West Campus Walk • Ceremonial Trail • Mascot Plaza
7C	New Development	4,736	50%	75%	4	12	9,472	42,624	• academic • student residence	• Demolish Jean Royce Hall and Social Centre and relocate displaced uses	• Mascot Plaza
7D	New Development	1,646	75%	95%	4	8	4,938	12,510	• academic • library • student life spaces (student government offices, club spaces, and student-run services, etc.)	• Relocate/compensate for displaced parking	• West Campus Green • West Campus Square • Union Street Streetscape Improvements • West Campus Walk • Ceremonial Trail • Sir John A. Macdonald Blvd. / Union Street Gateway
7E	New Development	3,504	75%	95%	4	8	10,512	26,630	• academic • library • student life spaces (student government offices, club spaces, and student-run services, etc.) • below-grade or structured parking	• Relocate/compensate for displaced parking	• West Campus Square • Union Street Streetscape Improvements • West Campus Walk • Sir John A. Macdonald Blvd. / Union Street Gateway • Union Street / West Campus Blvd.
Total		**15,606**					**40,018**	**155,911**			

▲ Figure 9-21

West Campus Precinct 7

West Campus Precinct 8

Athlete's Village Precinct

Precinct-Specific Guidelines

The Athlete's Village Precinct will continue to be the location for new athletic facilities, including a new stadium that is currently in the planning stages. The precinct's southern portion contains two potential development sites, suitable for new academic buildings or student residences. The West Campus Green and Athlete's Plaza will provide new gathering places for West Campus while new walks, pathways and roads will provide an expanded movement network. An expanded surface parking lot will be installed overtime as surface parking on Main Campus is displaced as a result of new development.

1. Ensure new development considers the location of new pedestrian paths and outdoor recreation facilities, and addresses these spaces through design, glazing, and the installation of lighting to increase safety in these areas.

2. The stadium redevelopment may incorporate the design and construction of Athlete's Square, a gathering spot and social space to meet before games.

3. Expanded surface parking may be necessary as Main Campus parking is displaced for new development. This installation will provide opportunities for improvements to the surface parking lot, and should include rows of trees that frame pedestrian walkways to buffer pedestrians from moving vehicles and provide shade.

4. As surface parking is expanded, new street connections to Sir John A. Macdonald Boulevard will be required to facilitate movement in and out of the lot. These should be integrated with the design of Sir West Campus Green, providing clearly demarcated pedestrian crossings. These new roads should contain tree-lined sidewalks to buffer pedestrians from moving traffic.

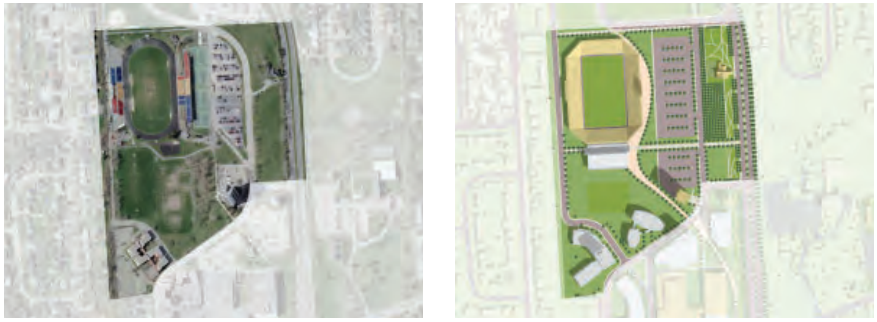
Figure 9-22
Precinct 8 Perspective

Sir John A Macdonald Boulevard
Hargreaves Lane
Stadium Lane

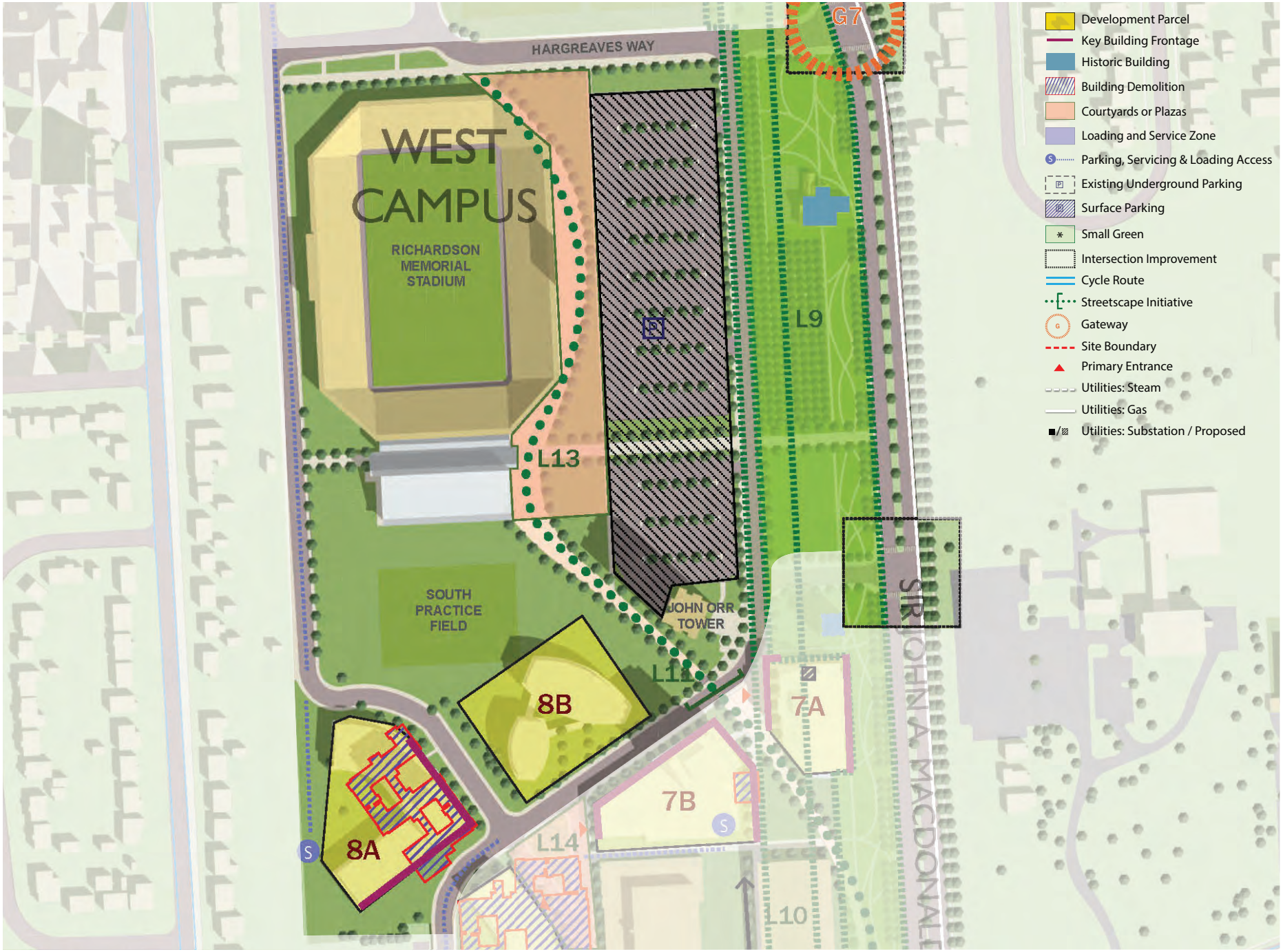
Athlete's Village Precinct

▼ Figure 9-23

Precinct 8 Proposed and Existing Conditions



	Project Type	Parcel Footprint (m^2)	Min/Max Coverage		Min/Max Height (Storeys)		Min/Max Gross Floor Area (m^2)		Permitted Uses	Enabling Projects	Coordinated Projects (required in bold)
Precinct 8 Athlete's Village Precinct											
8A	New Development	5,388	50%	75%	4	12	10,776	48,492	• academic • student residence • athletics/recreation	• Demolish Jean Royce Hall and Social Centre and relocate displaced uses	• Mascot Plaza
8B	New Development	4,226	50%	75%	4	6	8,452	19,017	• academic • student life spaces (student government offices, club spaces, and student-run services, etc.) • athletics/recreation	• Reconfigure south practice field	• Mascot Plaza
Total		**9,614**					**19,228**	**67,509**			



▲ Figure 9-24

West Campus Precinct 8

West Campus Precinct 9

Johnson Street Precinct

Precinct-Specific Guidelines

As the most northern portion of West Campus, the Johnson Street Precinct is the gateway to Queen's University from those arriving from the Sir John A. Macdonald Boulevard Highway 401 exit. While only a modest amount of new development is envisioned in this precinct, it will contain a number of new open space features that provide a sense of arrival and more varied visual interest to West Campus.

1. An enhanced gateway at the intersection of Sir John A. Macdonald Boulevard and Johnston Street should be installed, consisting of distinct landscaping and the existing or enhanced signage.

2. Improve lighting of the sports fields, pathways, and open spaces in this precinct. Explore ways to integrate such improvements with the design of new development or investment in gateway improvements.

3. As the only pedestrian access point to West Campus from Johnson Street, the northern entryway to the West Campus Green should feature a wide opening with prominent landscaping that signals entry to West Campus.

4. Parcel 9A and 9B are appropriate locations for athletic facilities, research facilities, or administrative offices that do not require close proximity to the nuclei of Main and West Campus activity. Located adjacent to the Portsmouth neighbourhood, development heights should be no more than six storeys for parcel 9A and four storeys for 9B. Landscaping should buffer facilities from adjacent residential properties.

Figure 9-25
Precinct 9 Perspective

Johnson Street
Hargreaves Way
Sir John A. Macdonald Boulevard

Johnson Street Precinct

▼ Figure 9-26

Precinct 9 Proposed and Existing Conditions

	Project Type	Parcel Footprint (m^2)	Min/Max Coverage		Min/Max Height (Storeys)		Min/Max Gross Floor Area (m^2)		Permitted Uses	Enabling Projects	Coordinated Projects (required in bold)
Precinct 9 Johnson Street Precinct											
9A	New Development	6,824	50%	75%	4	6	13,648	30,708	• athletic/recreation • administrative • research	• Demolish Coastal Engineering Lab and relocate displaced uses	
9B	New Development	1,800	50%	75%	1	4	900	5,400	• athletic/recreation • administrative • research	• Relocation of access road	• implementation of sidewalks on site
Total		**8,624**					**14,548**	**36,108**			

Figure 9-27

West Campus Precinct 9

Queen's University

Campus Master Plan • Appendix

Documents that have informed the development of the Campus Master Plan

- Campus Master Plan 2002
- Library and Archive Master Plan 2013
- An Active Transportation Strategy for Queen's University 2013
- Siting and Massing Study for Residences 2013
- Prison for Women Study 2012 – 2013
- VFA and FCI reports from Physical Plant Services 2013
- Capital Budget and Space Allocations 2013
- Academic Plan 2013
- Signage Policy 2002
- Third Juncture – Some Thoughts on the Past Present and Future of Queen's University Over the Next Decade 2012
- Climate Action Plan for Queen's University 2013
- Major Capital Projects Approval Process 2014
- COU space management and allocation report 2013
- Heritage Study 1998
- Departmental Strategic Plans 2013
- Queen's Parking Strategy 2013
- City of Kingston Master Transportation Plan 2012 – 2013
- City of Kingston Williamsville Study 2013
- City of Kingston Housing Strategy 2012-2013
- City of Kingston Recreation and Leisure Master Plan
- City of Kingston Town and Gown Strategic Plan
- City of Kingston Official Plan 2013
- KGH Phase 1 and 2 Redevelopment Plans
- Extending the Rafters: Truth and Reconciliation Commission Task Force Final Report
- Principal's Implementation Committee on Racism, Diversity, and Inclusion - Final Report 2017
- Report on The Conversation 2020